

Specification: V3



SUNRAYS

Recreating the possibilities

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Ventilator

V3 (Vision.B00)



Technical Specification

Physical Characteristics

Dimensions	1389mm × 528 mm × 697 mm (Height × Width × Depth) (including trolley); 343.5mm × 312.5 mm × 258 mm (Height × Width × Depth) (excluding trolley)
Weight	60 kg (with all safe working load) 10 kg (main unit)
Air Supply	Integrated ultra-silent turbine

Screen

Screen Size:	12.1" TFT touch screen
Resolution	1280 × 800
Brightness:	Adjustable

Ventilator Specification

Ventilation mode	V-A/C (Volume assist/control) P-A/C (Pressure assist/control) V-SIMV (Volume - Synchronized Intermittent Mandatory Ventilation) P-SIMV (Pressure - Synchronized Intermittent Mandatory Ventilation) CPAP/PSV, DuoVent, APRV, PRVC PRVC-SIMV VS PSV-S/T HFNC
Invasive Mode	V-A/C,P-A/C,V-SIMV, P-SIMV,CPAP/PSV, DuoVent, PRVC,APRV,PRVC-SIMV,VS

Non-invasive Mode	P-A/C,P-SIMV,CPAP/PSV, DuoVent,APRV,PSV-S/T
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Controlled parameter ranges

O ₂ %:	21 - 100% (increments of 1 %)
TV (Tidal Volume):	Adult: 100 - 2200 mL (increments of 10 mL) Pediatric: 20 - 300 mL (increments of 1 mL)
Respiratory Rate (RR):	1 - 100 bpm (increments of 1 bpm)
fSIMV (Ventilation frequency in SIMV mode):	1 - 60 bpm (increments of 1 bpm).
I:E range:	4:1~1:10.
T _{insp} (Inspiratory time):	0.10 - 10 s (increments of 0.05 s).
T _{slope} (Time of Pressure Rising):	0 - 2.00 s (increments of 0.05 s).
High Pressure Time (Thigh):	0.2 - 30 s (increments of 0.1 s)
T _{low} (Low Pressure Time):	0.2 - 30 s (increments of 0.1 s)
Max inspiratory Time (T _{imax}):	0.20 ~ 15.00 s(increments of 0.1 s)
T _{pause} :	5 % - 60 % (increments of 5 %), Off
ΔP _{insp} (Inspiratory pressure):	5 - 80 cmH ₂ O (increments of 1 cmH ₂ O)
ΔP _{supp} :	0 - 80 cmH ₂ O (increments of 1 cmH ₂ O)
P _{high} (High Pressure Level):	0 - 80 cmH ₂ O (increments of 1 cmH ₂ O)
P _{low} (Low Pressure Level):	0 - 50 cmH ₂ O (increments of 1 cmH ₂ O)
PEEP:	0 - 50 cmH ₂ O (increments of 1 cmH ₂ O), Off
Flow trigger	0.5 -15 L/min (increments of 0.1

	L/min), Off
Pressure trigger	-10 to - 0.5 cmH ₂ O (increments of 0.5 cmH ₂ O), Off

Sign pressure	0-45
Exp % (Expiration termination/trigger level)	10 - 85% (increments of 5%), Auto

Apnea Ventilation

TVapnea	Adult: 100 - 2200 mL (increments of 10 mL) Pediatric: 20 - 300 mL (increments of 1 mL)
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ΔPapnea	5 - 80 cmH ₂ O (increments of 1 cmH ₂ O)
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RRapnea (Apnea Respiratory Rate)	1 - 80 bpm (increments of 1 bpm)
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Apnea Tinsp	0.20 - 10 s (increments of 0.05 s)
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Sigh

Sigh Switch	ON, Off
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Interval	20 s - 180 min (increments of 1 s from 20 to 59 s, increments of 1 min from 1 to 180 min)
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Cycles Sigh	1 - 20 (increments of 1)
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Δint.PEEP	1 - 45 cmH ₂ O (increments of 1 cmH ₂ O), Off
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Automatic Tube Resistance Compensation

Tube Type	endotracheal intubation and tracheotomy tube
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Tube I.D.	Adult: 5.0 - 12.0 mm (increments of 0.5 mm) Pediatric: 2.5 - 8.0 mm (increments of 0.5 mm)
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Compensate	1 -100 % (increments of 1 %) off
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Expiration Compensation Switch	ON, Off
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Monitoring

Airway pressure range	Ppeak, Pplat, Pmean (Range -20 - 120 cmH ₂ O)
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PEEP	0~120 cmH ₂ O
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Tidal volume range:	0~4000 mL
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Respiratory Rate	ftotal, fmand, fspn (Range 0 - 200 bpm)
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Minute volume range	MV, MVspn, MVleak (Range 0 – 100.0 L/min)
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Resistance	Rinsp, Rexp (0 - 600 cmH ₂ O/L/s)
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Compliance	Cstat, Cdyn (0 - 300 mL/cmH ₂ O)
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Inspired Oxygen (FiO ₂)	15 - 100 %
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WOB (Work of Breathing)	0 – 100.0 J/min
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RCexp (Expiratory Time Constant)	0 - 10 s
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Waveforms	Airway pressure - time, Flow - time, Volume - time
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Weaning indicator

P0.1	-20 - 0 cmH ₂ O
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NIF (Maximum negative inspiratory pressure)	-45 - 0 cmH ₂ O
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RSBI (Rapid Shallow Breathing Index)	0 - 999 /(L•min)
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Special Function

Manual Breath	
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Expiration Hold	
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Inspiration Hold	
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Nebulizer	
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O ₂ ↑(O ₂ enrichment)	
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Sputum Suction	
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Pulmonary View	
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Lung Recruitment Tool	Sustained Insufflation
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PEEPi monitoring	
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P-V Tool	Paw - Volume, Flow - Volume, Paw - Flow
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Tube Resistance Compensation	TRC
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Smart Sync	IntelliSynTec
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O ₂ Therapy	2-60 L/min
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CO ₂	EtCO ₂ , V _{daw} , V _{Daw} /T _{ve} , V _{talv} , V' _{alv} , SlopeCO ₂ , V' _{CO₂} , V _{eCO₂} , V _{iCO₂}
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Control accuracy

O ₂ %	± (3 vol.% +1 % of setting)
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TV	± (10 mL + 10% of the set value)
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Tinsp	± 0.1 s or ± 10 % of setting, whichever is greater
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I: E	1:4~2:1: ± 10% of the set value; Other range: ± 15% of the set value.
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RR	±1 bpm
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fSIMV	±1 bpm
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Tslope (Rising Time)	± (0.2s + 20% of the set value)
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Phigh	$\pm (2 \text{ cmH}_2\text{O} + 5\% \text{ of the set value})$
Plow	$\pm (2 \text{ cmH}_2\text{O} + 5\% \text{ of the set value})$
Thigh	$\pm 0.2\text{s}$ or $\pm 10\%$ of the set value, whichever is larger
Tlow	$\pm 0.2\text{s}$ or $\pm 10\%$ of the set value, whichever is larger
Pressure Trigger	$\pm (1 \text{ cmH}_2\text{O} + \pm 10\% \text{ of the set value})$
Flow Trigger	$\pm (1 \text{ L/min} + 10\% \text{ of the set value})$
$\Delta \text{int.PEEP}$	$2\text{-}45\text{cmH}_2\text{O} \pm (2 \text{ cmH}_2\text{O} + 5\% \text{ of the set value})$ (exclude 2) $1\text{-}2\text{cmH}_2\text{O} \pm (1\% \text{ of the set value})$
Exp %	$\pm 10\%$ (absolute error)
Fapnea (Apnea Frequency)	$\pm 1\text{bpm}$
ΔPapnea	$\pm (2 \text{ cmH}_2\text{O} + 5\% \text{ of the set value})$
TVapnea	$\pm (10 \text{ mL} + 10\% \text{ of the set value})$
Apnea Tinsp	$\pm 0.1\text{s}$ or $\pm 10\%$ of the set value, whichever is larger

Monitoring Accuracy

Airway pressure (Ppeak, Pplat, Pmean, PEEP)	Within the range of $-20\text{cmH}_2\text{O} \sim 120 \text{ cmH}_2\text{O}$, $\pm (2 \text{ cmH}_2\text{O} + 4\% \text{ of the actual reading})$
Tidal Volume (TVi, TVe, TVe/IBW, TVe spn)	Within the range of $0 \text{ mL} \sim 100 \text{ mL}$, $\pm (10 \text{ mL} + 3\% \text{ of the actual reading})$; Within the range of $100 \text{ mL} \sim 4000 \text{ mL}$, $\pm (3 \text{ mL} + 10\% \text{ of the actual reading})$
Minute Volume (MV, MVspn, MVleak)	Within the range of $0.0 \text{ L/min} \sim 100.0 \text{ L/min}$, $\pm (0.2 \text{ L/min} + 10\% \text{ of the actual reading})$
Frequency (ftotal, fmand, fspn)	Within the range of $0 \text{ bpm} \sim 200 \text{ bpm}$, $\pm 1 \text{ bpm}$ or $\pm 5\%$ of the actual reading, whichever is larger
Inspired Oxygen (FiO ₂)	Within the range of $15 \text{ vol.}\% \sim 100 \text{ vol.}\%$, $\pm (2.5 \text{ vol.}\% + 2.5\% \text{ of the actual reading})$.
Resistance	Within the range of $0 \text{ cmH}_2\text{O}/(\text{L/s}) \sim 5 \text{ cmH}_2\text{O}/(\text{L/s})$, the accuracy is not defined; Within the range of $5 \text{ cmH}_2\text{O}/(\text{L/s}) \sim 20 \text{ cmH}_2\text{O}/(\text{L/s})$, $\pm 10 \text{ cmH}_2\text{O}/(\text{L/s})$;

	Within the range of $20 \text{ cmH}_2\text{O}/(\text{L/s}) \sim 500 \text{ cmH}_2\text{O}/(\text{L/s})$ (exclude 20), $\pm 50\%$ of the actual reading).
Compliance	Within the range of $0 \text{ mL/cmH}_2\text{O} \sim 300 \text{ mL/cmH}_2\text{O}$, $\pm (2 \text{ mL/cmH}_2\text{O} + 20\% \text{ of the actual reading})$.
RSBI	Within the range of $0 \text{ } /(\text{min}\cdot\text{L}) \sim 999 \text{ } /(\text{min}\cdot\text{L})$, $\pm (3 \text{ } /(\text{min}\cdot\text{L}) + 15\% \text{ of the actual reading})$.
WOB	Within the range of $0.0 \text{ J/min} \sim 100.0 \text{ J/min}$, $\pm (1 \text{ J/min} + 15\% \text{ of the actual reading})$.
NIF	Within the range of $-45.0 \text{ cmH}_2\text{O} \sim 0.0 \text{ cmH}_2\text{O}$, $\pm (2 \text{ cmH}_2\text{O} + 4\% \text{ of the actual reading})$
PO.1	Within the range of $-20.0 \text{ cmH}_2\text{O} \sim 0.0 \text{ cmH}_2\text{O}$, $\pm (2 \text{ cmH}_2\text{O} + 4\% \text{ of the actual reading})$.
RCexp	Within the range of $0.0\text{s} \sim 10.0\text{s}$, $\pm (0.2\text{s} + 20\% \text{ of the actual reading})$.

Alarm Settings

Tidal Volume	Upper alarm limit Adult: $110 \sim 4000 \text{ mL}$, OFF Pediatric: $25 \sim 600 \text{ mL}$, OFF Lower alarm limit Adult: OFF, $50 \sim 3995 \text{ mL}$ Pediatric: OFF, $10 \sim 595 \text{ mL}$
Minute Volume	Upper alarm limit: Adult: $0.2 \sim 100.0 \text{ L/min}$ Pediatric: $0.2 \sim 60.0 \text{ L/min}$ Lower alarm limit: Adult: $0.1 \sim 50.0 \text{ L/min}$ Pediatric: $0.1 \sim 30.0 \text{ L/min}$
FiO ₂ (LPO)	Upper alarm limit: $20 \text{ vol.}\% \sim 100 \text{ vol.}\%$ Lower alarm limit: $18 \text{ vol.}\% \sim 98 \text{ vol.}\%$
FiO ₂ (HPO)	Upper alarm limit: Min (Oxygen concentration setting value + max (7 vol.%, oxygen concentration setting value x

10%), 100 vol.%) (rounded) Lower alarm limit: Max (18 vol.%, oxygen concentration setting value-max (7 vol.%, oxygen concentration setting value x 10%)) (rounded)

Paw	Upper alarm limit: 10~90 cmH2O. Lower alarm limit: OFF, 5~ (upper alarm limit -5) cmH2O
ftotal	Upper alarm limit: 2~160 bpm, OFF . Lower alarm limit: OFF, 1~159 bpm
Frequency (Respiratory Rate)	Upper alarm limit: 2~160 bpm, OFF . Lower alarm limit: OFF, 1~159 bpm
Apnea alarm time	5-60 S

SideStream CO2 module

Displayed numerics	EtCO ₂
Measurement Range	Comen SideStream: 0 mmHg~150 mmHg, 0%~19.7%, 0 kPa~20 kPa (at 760 mmHg) Respironics Capno SideStream: 0 mmHg~99 mmHg, 0.0 %~13.0 %, 0 kPa~13.2 kPa (at 760 mmHg) Masimo ISA Capno SideStream: 0 mmHg~190 mmHg, 0 vol% ~ 25 vol% (at 760 mmHg)
Measurement accuracy	Comen SideStream: a) Within the range of 0 mmHg~40 mmHg, ± 2 mmHg; b) Within the range of 41 mmHg~70 mmHg, ± 5% of the reading; c) Within the range of 71 mmHg~100 mmHg, ± 8% of the reading; d) Within the range of 101 mmHg~150 mmHg, ± 10% of the reading. Respironics Capno SideStream: (Note: the gas temperature is 25°C, if respiratory rate is greater than 80 rpm, the accuracy is 12% of the reading): 0 mmHg~38 mmHg: ± 2 mmHg, 39 mmHg~99 mmHg: ± 10% of the

actual reading.

Masimo ISA Capno SideStream: CO2 accuracy (under the condition: 22°C ± 5°C 1013 ± 40 hPa; gas mixture of CO2 and N2.)

- a) Within the range of 0 mmHg ~114 mmHg, ± (1.52 mmHg + 2% of the reading).
b) Within the range of 114 mmHg ~190 mmHg, the accuracy is not defined.
CO2 accuracy (under all conditions):
a) Within the range of 0 mmHg ~114 mmHg, ± (2.25 mmHg + 4% of the reading).
b) Within the range of 115 mmHg ~190 mmHg, the accuracy is not defined

Waveforms	EtCO ₂ - time
Resolution	
Sampling rate and accuracy	Comen SideStream: sampling rate: 50 mL/min; sampling rate control accuracy: ± 10mL/min; Respironics Capno SideStream: sampling rate: 50 mL/min; sampling rate control accuracy: ± 10 mL/min. Masimo ISA Capno SideStream: sampling rate: 50mL/min; sampling rate control accuracy: ± 10 mL/min.
System response time	Masimo mainstream: < 1 s; Masimo ISA Capno sidestream: < 3s (use a 2 m sampling line)
Rise time (Response time)	Masimo mainstream: < 1 s; Masimo ISA Capno sidestream: < 3s (use a 2 m sampling line)
EtCO ₂ Alarm Upper Limits	Comen sidestream: (lower alarm limit + 2 mmHg) ~150 mmHg Respironics Capno sidestream: (lower alarm limit + 2 mmHg) ~99 mmHg Masimo ISA Capno sidestream: (lower alarm limit + 2 mmHg) ~

190 mmHg

EtCO₂ Alarm Lower Limits

Comen sidestream: 0 mmHg ~ (upper alarm limit - 2 mmHg)
 Respironics Capno sidestream: 0 mmHg ~ (upper alarm limit - 2 mmHg)
 Masimo ISA Capno sidestream: 0 mmHg ~ (upper alarm limit - 2 mmHg)

MainStream CO₂ Module

Displayed numerics

EtCO₂

EtCO₂ Measurement range

Comen mainstream: 0 mmHg ~ 150 mmHg, 0% ~ 19.7%, 0 kPa ~ 20 kPa (at 760 mmHg);
 Respironics CAPNOSTAT 5: 0 mmHg ~ 150 mmHg, 0% ~ 19.7%, 0 kPa ~ 20 kPa (at 760 mmHg);
 Masimo IRMATM mainstream: 0 mmHg ~ 190 mmHg, 0 vol% ~ 25 vol% (at 760 mmHg);

EtCO₂ Measurement Accuracy

Comen mainstream:
 a) Within the range of 0 mmHg ~ 40 mmHg, ± 2 mmHg;
 b) Within the range of 41 mmHg ~ 70 mmHg, ± 5% of the reading;
 c) Within the range of 71 mmHg ~ 100 mmHg, ± 8% of the reading;
 d) Within the range of 101 mmHg ~ 150 mmHg, ± 10% of the reading.
 Respironics CAPNOSTAT 5 mainstream: CO₂ accuracy (Note: Temperature :35°C):
 a) Within the range of 0 mmHg ~ 40 mmHg, ± 2 mmHg;
 b) Within the range of 41 mmHg ~ 70 mmHg, ± 5% of the reading;
 c) Within the range of 71 mmHg ~ 100 mmHg, ± 8% of the reading;
 d) Within the range of 101 mmHg ~ 150 mmHg, ± 10% of the reading.

Masimo IRMATM mainstream: CO₂ accuracy (under the condition: 22°C ± 5°C 1013 ± 40 hPa; gas mixture of CO₂ and N₂.):

- a) Within the range of 0 mmHg ~ 114 mmHg, ± (1.52 mmHg + 2% of the reading);
 - b) Within the range of 114 mmHg ~ 190 mmHg, the accuracy is not defined;
- CO₂ accuracy (under all conditions):
- a) Within the range of 0 mmHg ~ 114 mmHg, ± (2.25 mmHg + 4% of the reading);
 - b) Within the range of 114 mmHg ~ 190 mmHg, the accuracy is not defined;

Resolution

Waveforms

EtCO₂ - time, V - CO₂

EtCO₂ Alarm Upper Limits

Comen mainstream: (lower alarm limit + 2 mmHg) ~ 150 mmHg
 Respironics CAPNOSTAT 5 mainstream: (lower alarm limit + 2 mmHg) ~ 150 mmHg
 Masimo IRMATM mainstream: (lower alarm limit + 2 mmHg) ~ 190 mmHg

EtCO₂ Alarm Lower Limits

Comen mainstream: 0 mmHg ~ (upper alarm limit - 2 mmHg)
 Respironics CAPNOSTAT 5 mainstream: 0 mmHg ~ (upper alarm limit - 2 mmHg)
 Masimo IRMATM mainstream: 0 mmHg ~ (upper alarm limit - 2 mmHg)

SpO₂ module:

Display Pulse rate (PR) waveform/parameter, SpO₂

SpO₂ measurement range

Nellcor SpO₂: 0% ~ 100%
 Masimo SpO₂: 1% ~ 100%
 Comen SpO₂: 0% ~ 100%

SpO₂ accuracy

Nellcor SpO₂: Within the range of 70% ~ 100%, Adult/Pediatric measurement accuracy is ± 2%

(during non-motion state); Within the range of 0%~69%, measurement accuracy is not defined.

Masimo SpO2: Within the range of 70%~100%, Adult/Pediatric measurement accuracy is $\pm 2\%$ (during non-motion state), $\pm 3\%$ (during motion state); Within the range of 1%~69%, the measurement accuracy is not defined.

Comen SpO2: Within the range of 70%~100%, Adult/ Pediatric measurement accuracy is $\pm 2\%$ (during non-motion state); Within the range of 0%~69%, the measurement accuracy is not defined.

PR measurement range	Nellcor SpO2: 20 bpm~300 bpm Masimo SpO2: 25 bpm~240 bpm Comen SpO2: 20 bpm~300 bpm
PR measurement resolution	Nellcor SpO2: resolution: 1 bpm Masimo SpO2: resolution: 1 bpm Comen SpO2: resolution: 1 bpm
PR measurement accuracy	Nellcor SpO2: 20 bpm~250 bpm: the measurement error should be ± 3 bpm; 251~300 bpm: measurement accuracy is not defined. Masimo SpO2: the measurement error should be ± 3 bpm (during non-motion state) and ± 5 bpm (during motion state) Comen SpO2: the measurement error should be ± 2 bpm
Perfusion index range	Nellcor SpO2: / (Note: Nellcor SpO2 module has no perfusion index.) Masimo SpO2: 0.02%~20%, the accuracy is not defined. Comen SpO2: 0.05%~20%, the accuracy is not defined.
Data update period	≤ 2 s
Signal Quality Index (SIQ)	Masimo SpO2 and Comen SpO2

indication function	should come with SIQ indication function
Regulatory compliance	should conform to the requirements of YY0784-2010
Upper SpO2 alarm limit	Nellcor SpO2: (Lower alarm limit +1%)~100% Masimo SpO2: (Lower alarm limit +1%)~100% Comen SpO2: (Lower alarm limit +1%)~100%
Lower SpO2 alarm limit	Nellcor SpO2: 20%~(Upper alarm limit -1%) Masimo SpO2: 1%~(Upper alarm limit -1%) Comen SpO2: 0%~(Upper alarm limit -1%)
Upper PR alarm limit	Nellcor SpO2: (Lower alarm limit +1 bpm)~300 bpm Masimo SpO2: (Lower alarm limit +1 bpm)~240 bpm Comen SpO2: (Lower alarm limit +1 bpm)~254 bpm
Lower PR alarm limit	Nellcor SpO2: 25bpm~(Upper alarm limit -1bpm) Masimo SpO2: 25bpm~(Upper alarm limit -1bpm) Comen SpO2: 20bpm~(Upper alarm limit -1bpm)

Trend

TypeTabular, Graphic

Length	72 hours
Content	Monitor Parameters, Setting Parameters (Setting Ventilation mode and Parameters) includes parameter alarm events and parameter waveforms related to the alarm time

Data Review

Event logs Up to 8000 event logs can be saved, including alarm logs and operation logs. The alarm log includes parameter alarm events and parameter waveforms related to the alarm time.

Freeze the waveform review	Freeze the waveform of the interface at the current time and
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use the knob to review the data. When freezing, 30 most recent historical waveforms can be reviewed by sliding the screen or rotating the knob.

Freeze the loop review Up to 5 reference loops can be saved.

O₂ Therapy

O₂ %21 - 100 % (increments of 1 %) ± (3 vol.% +1 % of setting)

Flow 2 - 60 L/min ± (1.5 L/min +10 % of setting) (BTPS)

Gas Circuit Specification

Gas type Air, O₂

Gas source requirement Medical compressed oxygen

High-pressure O₂ source

Gas source pressure range 280~600 kPa

Rated flow rate requirement 120 L/min

Input connector NIST (ISO 5356-1) or DISS (CGA 1240)

Standards compliant YY/T 0799-2010
EN ISO5359:2008

Low-pressure O₂ source

Input pressure range < 100 kPa

Maximum flow rate 15 L/min

Input connector CPC quick coupling

Inspiratory module

Peak flow rate ≥ 210 L/min

Nebulizer connector Flow rate: 5 L/min~8 L/min

Safety pressure of respiration ≤ 12.5 kPa

Inspiratory-side external connector Coaxial 22 mm/15 mm conical connector

Removable, sterilizable can be entirely removed quickly; and can be entirely cleaned and disinfected.

Regulatory compliance YY1040.1-2003
EN ISO5356-1:2004

Expiratory module

Expiratory-side external connector Coaxial 22 mm/15 mm conical connector

Removable, sterilizable can be entirely removed quickly; and can be entirely cleaned and disinfected.

Regulatory compliance YY1040.1-2003
EN ISO5356-1:2004

System compliance and resistance

Compliance Adult disposable circuit (including inspiratory safety valve, adult disposable breathing tube, water collection cup, expiratory valve): ≤ 4 mL/cmH₂O;

Adult reusable circuit (including inspiratory safety valve, adult reusable breathing tube, water collection cup, expiratory valve, Y-joint): ≤ 2 mL/cmH₂O;

Pediatric disposable circuit (including inspiratory safety valve, pediatric disposable breathing tube, water collection cup, expiratory valve): ≤ 2 mL/cmH₂O;

Pediatric reusable circuit (including inspiratory safety valve, pediatric reusable breathing tube, water collection cup, expiratory valve, Y-joint): ≤ 2 mL/cmH₂O;

Neonate reusable circuit (including inspiratory safety valve, neonate reusable breathing tube, water collection cup, expiratory valve, Y-joint): ≤ 1 mL/cmH₂O.

Inspiratory resistance ≤ 6 cmH₂O at the flow rate of 60 L/min (Adult);
≤ 6 cmH₂O at the flow rate of 30 L/min (Pediatric);
≤ 6 cmH₂O at the flow rate of 5 L/min (Neonate).

Expiratory resistance ≤ 6 cmH₂O at the flow rate of 60 L/min (Adult);
≤ 6 cmH₂O at the flow rate of 30 L/min (Pediatric);
≤ 6 cmH₂O at the flow rate of 5

L/min (Neonate).

Basic performance

Pressure monitoring range -20~120 cmH2O

Safety pressure of system

 In ventilation state: ≤ 125 cmH2O
 In non-ventilation state or power failure or gas source failure (<0.12 MPa): ≤ 14 cmH2O

Environmental specifications

 Temperature 5 - 40 °C (operating); -20 to 60 °C (storage and transport, O₂ sensor: -20 to 50°C)

Relative Humidity 5 - 95 % (operating); 5 - 95 % (storage and transport)

Barometric Pressure 62 - 106 kPa (operating); 50 -106 kPa (storage and transport)

Power Specification
External AC power supply

Input voltage 100 - 240 V

Input frequency 50/60 Hz

Input current 1.2 – 0.5 A

Fuse

T3AL/250 V

External DC power supply

Input voltage 12V

Input current 10A

Internal battery

Number of batteries One or Two

Battery type Build-in Lithium-ion battery, 14.4 VDC, 6700mAh

 Battery life 140 min (when a new fully charged battery is used in standard operating mode)
 280 min (when two new fully charged batteries are used in standard operating mode)

Recharge Time	Single battery:3 hours
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I/O

Communication interface	Rs232, Ethernet, VGA, USB port, Nurse call
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Trolley MC100

Dimensions	687.5 × 528.8 × 1040.6 mm
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Weight	20 kg
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Package

Outer package	Cardboard box
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size	570*400*480 mm
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Rough weight	14.0 kg
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Net weight	10.0kg
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Standard

Biocompatibility	ISO10993-1
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Product	ISO80601-2-12
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	IEC60601-1-8
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	ISO80601-2-55
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	ISO80601-2-61
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	IEC 60529
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SpO2 module	ISO 80601-2-61
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High-pressure O2 source	
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Input connector	NIST (ISO 5356-1) or DISS (CGA 1240)
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Hose compliance standard	EN ISO5359
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Inspiratory module	
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Connector compliance standard	ENISO 5356-1
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Expiratory module	
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Regulatory compliance	EN ISO5356-1
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Gas compatibility	ISO18562
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EMC	IEC 60601-1-2: 2014
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	IEC 61000-3-2
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	IEC 61000-3-3
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	IEC 61000-4-2
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	IEC 61000-4-4
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	IEC 61000-4-5
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Notice: Specifications subject to changes without prior

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EMC	IEC 61000-4-11
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	IEC 61000-4-8
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	IEC 61000-4-6
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	IEC 61000-4-3
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	IEC 61000-4-3
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