

# Specification: V3



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# Ventilator

## V3



### Technical Specification

#### Physical Characteristics

|            |   |
|------------|---|
| Dimensions | 1389mm × 528 mm × 697 mm<br>(Height × Width × Depth) (including trolley);<br>343.5mm × 312.5 mm × 258 mm<br>(Height × Width × Depth)<br>(excluding trolley) |
| Weight     | 30±0.5 kg (including trolley)<br>10±0.5 kg (excluding trolley)  |
| 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)<br>P-A/C (Pressure assist/control)<br>V-SIMV (Volume - Synchronized Intermittent Mandatory Ventilation)<br>P-SIMV (Pressure - Synchronized Intermittent Mandatory Ventilation)<br>CPAP/PSV,<br>DuoVent,<br>APRV,<br>PRVC<br>PRVC-SIMV<br>VS<br>PSV-S/T |
| Invasive Mode    | V-A/C, P-A/C, V-SIMV, P-SIMV,<br>CPAP/PSV, DuoVent, PRVC, APRV,<br>PRVC-SIMV, VS   |

|                   |  |
|-------------------|--|
| Non-invasive Mode | P-A/C, P-SIMV, CPAP/PSV,<br>DuoVent, APRV, PSV-S/T |
|-------------------|--|

#### Controlled parameter ranges

|   |   |
|---|---|
| O <sub>2</sub> %:                             | 21 - 100% (increments of 1 %)   |
| TV (Tidal Volume):                            | Adult: 100 - 2200 mL (increments of 10 mL)<br>Pediatric: 20 - 300 mL (increments of 1 mL) |
| Respiratory Rate (RR):                        | 0 - 100 bpm (increments of 1 bpm)   |
| fSIMV (Ventilation frequency in SIMV mode):   | 1 - 60 bpm (increments of 1 bpm).   |
| I:E range:                                    | 1:10~4:1.   |
| T <sub>insp</sub> (Inspiratory time):         | 0 - 10 s (increments of 0.05 s).  |
| T <sub>slope</sub> (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 <sub>low</sub> (Low Pressure Time):         | 0.2 - 30 s (increments of 0.1 s)  |
| Max inspiratory Time (T <sub>imax</sub> ):    | 0 ~ 15.00 s (increments of 0.1 s)   |
| T <sub>pause</sub> :                          | 5 % - 60 % (increments of 5 %), Off   |
| ΔP <sub>insp</sub> (Inspiratory pressure):    | 0 - 80 cmH <sub>2</sub> O (increments of 1 cmH <sub>2</sub> O)                            |
| ΔP <sub>supp</sub> :                          | 0 - 85 cmH <sub>2</sub> O (increments of 1 cmH <sub>2</sub> O)                            |
| Phigh (High Pressure Level):                  | 0 - 80 cmH <sub>2</sub> O (increments of 1 cmH <sub>2</sub> O)                            |
| Plow (Low Pressure Level):                    | 0 - 50 cmH <sub>2</sub> O (increments of 1 cmH <sub>2</sub> O)                            |
| PEEP:   | 0 - 50 cmH <sub>2</sub> O (increments of 1 cmH <sub>2</sub> O), Off                       |

|  |  |
|--|--|
| Flow trigger                                 | 0.5 -15 L/min (increments of 0.1 L/min), Off                               |
| Pressure trigger                             | -10 to -0.5 cmH <sub>2</sub> O (increments of 0.5 cmH <sub>2</sub> O), Off |
| 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) |
| ΔPapnea                          | 5 - 80 cmH <sub>2</sub> O (increments of 1 cmH <sub>2</sub> O)                         |
| RRapnea (Apnea Respiratory Rate) | 1 - 80 bpm (increments of 1 bpm)   |
| Apnea Tinsp                      | 0.20 - 10 s (increments of 0.05 s)   |

### Sigh

|             |   |
|-------------|---|
| Sigh Switch | ON, Off   |
| Interval    | 20 s - 180 min (increments of 1 s from 20 to 59 s, increments of 1 min from 1 to 180 min) |
| Cycles Sigh | 1 - 20 (increments of 1)  |
| Δint.PEEP   | 1 - 45 cmH <sub>2</sub> O (increments of 1 cmH <sub>2</sub> O), Off                       |

### Automatic Tube Resistance Compensation

|                                |  |
|--------------------------------|--|
| Tube Type                      | endotracheal intubation and tracheotomy tube   |
| 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) |
| Compensate                     | 1 -100 % (increments of 1 %) off   |
| Expiration Compensation Switch | ON, Off  |

### Monitoring

|                       |  |
|-----------------------|--|
| Airway pressure range | Ppeak, Pplat, Pmean (Range -20 - 120 cmH <sub>2</sub> O) |
| PEEP                  | 0~120 cmH <sub>2</sub> O                                 |
| Tidal volume range:   | 0~4000 mL  |
| Respiratory Rate      | ftotal, fmand, fspn (Range 0 - 200 bpm)                  |
| Minute volume range   | MV, MVspn, MVleak (Range 0 – 100.0 L/min)                |
| Resistance            | Rinsp, Rexp (0 - 600 cmH <sub>2</sub> O/L/s)             |

|                                     |  |
|-------------------------------------|--|
| Compliance                          | Cstat, Cdyn (0 - 300 mL/cmH <sub>2</sub> O)        |
| Inspired Oxygen (FiO <sub>2</sub> ) | 15 - 100 %   |
| WOB (Work of Breathing)             | 0 – 100.0 J/min                                    |
| RCexp (Expiratory Time Constant)    | 0 - 10 s   |
| Waveforms                           | Airway pressure - time, Flow - time, Volume - time |

### Weaning indicator

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

### Special Function

|   |  |
|---|--|
| Manual Breath                               |  |
| Expiration Hold                             |  |
| Inspiration Hold                            |  |
| Nebulizer                                   |  |
| O <sub>2</sub> ↑(O <sub>2</sub> enrichment) |  |
| Sputum Suction                              |  |
| Smart Pulmonary View                        |  |
| Lung Recruitment Tool                       | Sustained Insufflation   |
| PEEPi monitoring                            |  |
| P-V Tool                                    | Paw - Volume, Flow - Volume, Paw - Flow  |
| Tube Resistance Compensation                | TRC  |
| Smart Sync                                  | IntelliSynTec  |
| O <sub>2</sub> Therapy                      | 2-60 L/min   |
| CO <sub>2</sub>                             | EtCO <sub>2</sub> , V <sub>daw</sub> , V <sub>daw</sub> /T <sub>ve</sub> , V <sub>talv</sub> , V' <sub>alv</sub> , SlopeCO <sub>2</sub> , V' <sub>CO<sub>2</sub></sub> , V <sub>e</sub> CO <sub>2</sub> , V <sub>i</sub> CO <sub>2</sub> |

### Control accuracy

|                  |   |
|------------------|---|
| O <sub>2</sub> % | ± (3 vol.% +1 % of setting)   |
| TV               | ± (10 mL + 10% of the set value)  |
| Tinsp            | ± 0.1 s or ± 10 % of setting, whichever is greater                              |
| I: E             | 1:4~2:1: ± 10% of the set value; Other range(1:10~4:1): ± 15% of the set value. |
| RR               | ±1 bpm  |
| fSIMV            | ±1 bpm  |

|                          |  |
|--------------------------|--|
| Tslope (Rising Time)     | $\pm (0.2s + 20\%$ of the set value)   |
| Phigh                    | $\pm (2 \text{ cmH}_2\text{O} + 5\%$ of the set value)   |
| Plow                     | $\pm (2 \text{ cmH}_2\text{O} + 5\%$ of the set value)   |
| Thigh                    | $\pm 0.2s$ or $\pm 10\%$ of the set value, whichever is larger   |
| Tlow                     | $\pm 0.2s$ or $\pm 10\%$ of the set value, whichever is larger   |
| Pressure Trigger         | $\pm (1 \text{ cmH}_2\text{O} + \pm 10\%$ of the set value)  |
| Flow Trigger             | $\pm (1 \text{ L/min} + 10\%$ of the set value)  |
| $\Delta$ int.PEEP        | $2-45\text{cmH}_2\text{O} \pm (2 \text{ cmH}_2\text{O} + 5\%$ of the set value) (exclude 2) $1-2\text{cmH}_2\text{O} \pm (1\%$ of the set value) |
| Exp %                    | $\pm 10\%$ (absolute error)  |
| Fapnea (Apnea Frequency) | $\pm 1\text{bpm}$  |
| $\Delta$ Papnea          | $\pm (2 \text{ cmH}_2\text{O} + 5\%$ of the set value)   |
| TVapnea                  | $\pm (10 \text{ mL} + 10\%$ of the set value)  |
| Apnea Tinsp              | $\pm 0.1s$ or $\pm 10\%$ of the set value, whichever is larger   |

### Monitoring Accuracy

|   |  |
|---|--|
| Airway pressure (Ppeak, Pplat, Pmean, PEEP) | Within the range of $-20\text{cmH}_2\text{O} \sim 120 \text{ cmH}_2\text{O}$ , $\pm (2 \text{ cmH}_2\text{O} + 4\%$ of the actual reading)   |
| Tidal Volume (TVi, TVe, Tve/IBW, Tve spn)   | Within the range of $0 \text{ mL} \sim 100 \text{ mL}$ , $\pm (10 \text{ mL} + 3\%$ of the actual reading);<br>Within the range of $100 \text{ mL} \sim 4000 \text{ mL}$ , $\pm (3 \text{ mL} + 10\%$ of the actual reading) |
| Minute Volume (MV, MVspn, MVleak)           | Within the range of $0.0 \text{ L/min} \sim 100.0 \text{ L/min}$ , $\pm (0.2 \text{ L/min} + 10\%$ 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 <sub>2</sub> )         | Within the range of $15 \text{ vol.}\% \sim 100 \text{ vol.}\%$ , $\pm (2.5 \text{ vol.}\% + 2.5\%$ 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 $5 \text{ cmH}_2\text{O}/(\text{L/s}) \sim 20 \text{ cmH}_2\text{O}/(\text{L/s})$ , $\pm 10 \text{ cmH}_2\text{O}/(\text{L/s})$ ;<br>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 $0 \text{ mL/cmH}_2\text{O} \sim 300 \text{ mL/cmH}_2\text{O}$ , $\pm (2 \text{ mL/cmH}_2\text{O} + 20\%$ of the actual reading).   |
| RSBI       | Within the range of $0 \text{ /}(\text{min}\cdot\text{L}) \sim 999 \text{ /}(\text{min}\cdot\text{L})$ , $\pm (3 \text{ /}(\text{min}\cdot\text{L}) + 15\%$ of the actual reading).   |
| WOB        | Within the range of $0.0 \text{ J/min} \sim 100.0 \text{ J/min}$ , $\pm (1 \text{ J/min} + 15\%$ of the actual reading).  |
| NIF        | Within the range of $-45.0 \text{ cmH}_2\text{O} \sim 0.0 \text{ cmH}_2\text{O}$ , $\pm (2 \text{ cmH}_2\text{O} + 4\%$ of the actual reading)  |
| PO.1       | Within the range of $-20.0 \text{ cmH}_2\text{O} \sim 0.0 \text{ cmH}_2\text{O}$ , $\pm (2 \text{ cmH}_2\text{O} + 4\%$ of the actual reading).   |
| RCexp      | Within the range of $0.0s \sim 10.0s$ , $\pm (0.2s + 20\%$ of the actual reading).  |

### Alarm Settings

|                                     |   |
|-------------------------------------|---|
| Tidal Volume                        | Upper alarm limit Adult: $110 \sim 4000 \text{ mL}$ , OFF<br>Pediatric: $25 \sim 600 \text{ mL}$ , OFF<br>Lower alarm limit Adult: OFF, $50 \sim 3995 \text{ mL}$<br>Pediatric: OFF, $10 \sim 595 \text{ mL}$ |
| Minute Volume                       | Upper alarm limit: Adult: $0.2 \sim 100.0 \text{ L/min}$<br>Pediatric: $0.2 \sim 60.0 \text{ L/min}$<br>Lower alarm limit: Adult: $0.1 \sim 50.0 \text{ L/min}$<br>Pediatric: $0.1 \sim 30.0 \text{ L/min}$   |
| Airway pressure                     |   |
| Frequency (Respiratory Rate)        |   |
| Inspired oxygen (FiO <sub>2</sub> ) | Upper alarm limit: $10 \sim 90 \text{ cmH}_2\text{O}$ .   |

|                              |  |
|------------------------------|--|
|                              | Lower alarm limit: OFF,5~ (upper alarm limit -5) cmH2O   |
| Apnea alarm time             | Upper alarm limit: 2~160 bpm, OFF<br>Lower alarm limit: OFF,1~(upper alarm limit -1) bpm   |
| <b>SideStream CO2 module</b> |  |
| Displayed numerics           | EtCO <sub>2</sub>  |
| Measurement Range            | Comen SideStream: 0 mmHg~150 mmHg, 0%~19.7%, 0 kPa~20 kPa (at 760 mmHg)<br>Respironics Capno SideStream: 0 mmHg~99 mmHg, 0.0%~13.0%, 0 kPa~13.2 kPa (at 760 mmHg)<br>Masimo ISA Capno SideStream: 0 mmHg~190 mmHg, 0 vol% ~ 25 vol% (at 760 mmHg)  |
| Measurement accuracy         | Comen SideStream:<br>a) Within the range of 0 mmHg~40 mmHg, ± 2 mmHg;<br>b) Within the range of 41 mmHg~70 mmHg, ± 5% of the reading;<br>c) Within the range of 71 mmHg~100 mmHg, ± 8% of the reading;<br>d) Within the range of 101 mmHg~150 mmHg, ± 10% of the reading.<br>Respironics Capno SideStream:<br>(Note: the gas temperature is 25°C, if respiratory rate is greater than 80 rpm, the accuracy is 12% of the reading):<br>0 mmHg~38 mmHg: ± 2 mmHg,<br>39 mmHg~99 mmHg: ± 10% of the actual reading.<br>Masimo ISA Capno SideStream:<br>CO2 accuracy (under the condition: 22°C ± 5°C 1013 ± 40 hPa; gas mixture of CO2 and N2.)<br>a) Within the range of 0 mmHg ~114 mmHg, ± (1.52 mmHg + 2% of the reading).<br>b) Within the range of 114 mmHg ~190 mmHg, the accuracy is not defined. |

|                                      |   |
|--------------------------------------|---|
|                                      | CO2 accuracy (under all conditions):<br>a) Within the range of 0 mmHg ~114 mmHg, ± (2.25 mmHg + 4% of the reading).<br>b) Within the range of 115 mmHg ~190 mmHg, the accuracy is not defined   |
| Waveforms                            | EtCO <sub>2</sub> - time  |
| Resolution                           |   |
| Sampling rate and accuracy           | Comen SideStream: sampling rate: 50 mL/min; sampling rate control accuracy: ± 10mL/min;<br>Respironics Capno SideStream: sampling rate: 50 mL/min; sampling rate control accuracy: ± 10 mL/min.<br>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 <sub>2</sub> Alarm Upper Limits | Comen sidestream: (lower alarm limit + 2 mmHg) ~150 mmHg<br>Respironics Capno sidestream: (lower alarm limit + 2 mmHg) ~99 mmHg<br>Masimo ISA Capno sidestream: (lower alarm limit + 2 mmHg) ~ 190 mmHg   |
| EtCO <sub>2</sub> Alarm Lower Limits | Comen sidestream: 0 mmHg ~ (upper alarm limit - 2 mmHg)<br>Respironics Capno sidestream: 0 mmHg ~ (upper alarm limit - 2 mmHg)<br>Masimo ISA Capno sidestream: 0 mmHg ~ (upper alarm limit - 2 mmHg)  |

## MainStream CO<sub>2</sub> Module

|  |  |                                      |   |
|--|--|--------------------------------------|---|
| Displayed numerics                     | EtCO <sub>2</sub>  |                                      |   |
| EtCO <sub>2</sub> Measurement range    | Comen mainstream: 0 mmHg~150 mmHg,0%~19.7%,0 kPa~20 kPa (at 760 mmHg);<br>Respironics CAPNOSTAT 5: 0 mmHg~150 mmHg, 0%~19.7%, 0 kPa~20 kPa (at 760 mmHg);<br>Masimo IRMATM mainstream: 0 mmHg~190 mmHg, 0 vol% ~ 25 vol% (at 760 mmHg);  |                                      | CO2 accuracy (under all conditions):<br>a) Within the range of 0 mmHg ~ 114 mmHg, $\pm$ (2.25 mmHg + 4% of the reading);<br>b) Within the range of 114 mmHg ~190 mmHg, the accuracy is not defined;   |
| EtCO <sub>2</sub> Measurement Accuracy | Comen mainstream:<br>a) Within the range of 0mmHg~40mmHg, $\pm$ 2 mmHg;<br>b) Within the range of 41mmHg~70mmHg, $\pm$ 5% of the reading;<br>c) Within the range of 71mmHg~100mmHg, $\pm$ 8% of the reading;<br>d) Within the range of 101mmHg~150mmHg, $\pm$ 10% of the reading.<br>Respironics CAPNOSTAT 5 mainstream: CO2 accuracy (Note: Temperature :35°C):<br>a) Within the range of 0 mmHg~40 mmHg, $\pm$ 2 mmHg;<br>b) Within the range of 41 mmHg~70 mmHg, $\pm$ 5% of the reading;<br>c) Within the range of 71 mmHg~100 mmHg, $\pm$ 8% of the reading;<br>d) Within the range of 101 mmHg~150 mmHg, $\pm$ 10% of the reading.<br>Masimo IRMATM mainstream: CO2 accuracy (under the condition: 22°C $\pm$ 5°C 1013 $\pm$ 40 hPa; gas mixture of CO2 and N2.):<br>a) Within the range of 0 mmHg ~ 114 mmHg, $\pm$ (1.52 mmHg + 2% of the reading);<br>b) Within the range of 114 mmHg ~190 mmHg, the accuracy is not defined; | Resolution                           |   |
|  |  | Waveforms                            | EtCO <sub>2</sub> - time, V - CO <sub>2</sub>   |
|  |  | EtCO <sub>2</sub> Alarm Upper Limits | Comen mainstream: (lower alarm limit + 2 mmHg) ~150 mmHg<br>Respironics CAPNOSTAT 5 mainstream: (lower alarm limit +2mmHg) ~150 mmHg<br>Masimo IRMATM mainstream: (lower alarm limit + 2 mmHg) ~ 190 mmHg   |
|  |  | EtCO <sub>2</sub> Alarm Lower Limits | Comen mainstream: 0 mmHg ~ (upper alarm limit - 2 mmHg)<br>Respironics CAPNOSTAT 5 mainstream: 0 mmHg~ (upper alarm limit - 2 mmHg)<br>Masimo IRMATM mainstream: 0 mmHg~ (upper alarm limit - 2 mmHg)   |
| <b>SpO<sub>2</sub> module:</b>         |  |                                      |   |
|  |  | Display                              | Pulse rate (PR) waveform/parameter, SpO <sub>2</sub>  |
|  |  | SpO <sub>2</sub> measurement range   | Nellcor SpO <sub>2</sub> : 0%~100%<br>Masimo SpO <sub>2</sub> : 1%~100%<br>Comen SpO <sub>2</sub> : 0%~100%   |
|  |  | SpO <sub>2</sub> accuracy            | Nellcor SpO <sub>2</sub> : Within the range of 70%~100%, Adult/Pediatric measurement accuracy is $\pm$ 2% (during non-motion state); Within the range of 0%~69%, measurement accuracy is not defined.<br>Masimo SpO <sub>2</sub> : 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.<br>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<br>Masimo SpO2: 25 bpm~240 bpm<br>Comen SpO2: 20 bpm~300 bpm   |
| PR measurement resolution                      | Nellcor SpO2: resolution: 1 bpm<br>Masimo SpO2: resolution: 1 bpm<br>Comen SpO2: resolution: 1 bpm  |
| PR measurement accuracy                        | Nellcor SpO2: 20 bpm~250 bpm: the measurement error should be $\pm 3$ bpm; 251~300 bpm: measurement accuracy is not defined.<br>Masimo SpO2: the measurement error should be $\pm 3$ bpm (during non-motion state) and $\pm 5$ bpm (during motion state)<br>Comen SpO2: the measurement error should be $\pm 2$ bpm |
| Perfusion index range                          | Nellcor SpO2: / (Note: Nellcor SpO2 module has no perfusion index.)<br>Masimo SpO2: 0.02%~20%, the accuracy is not defined.<br>Comen SpO2: 0.05%~20%, the accuracy is not defined.  |
| Data update period                             | $\leq 2$ s  |
| Signal Quality Index (SIQ) indication function | Masimo SpO2 and Comen SpO2 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%<br>Masimo SpO2: (Lower alarm limit   |

|                        |   |
|------------------------|---|
|                        | +1%)~100%<br>Comen SpO2: (Lower alarm limit +1%)~100%   |
| Lower SpO2 alarm limit | Nellcor SpO2: 20%~(Upper alarm limit -1%)<br>Masimo SpO2: 1%~(Upper alarm limit -1%)<br>Comen SpO2: 0%~(Upper alarm limit -1%)                        |
| Upper PR alarm limit   | Nellcor SpO2: (Lower alarm limit +1 bpm)~300 bpm<br>Masimo SpO2: (Lower alarm limit +1 bpm)~240 bpm<br>Comen SpO2: (Lower alarm limit +1 bpm)~254 bpm |
| Lower PR alarm limit   | Nellcor SpO2: 25bpm~(Upper alarm limit -1bpm)<br>Masimo SpO2: 25bpm~(Upper alarm limit -1bpm)<br>Comen SpO2: 20bpm~(Upper alarm limit -1bpm)          |

## Trend

|         |  |
|---------|--|
| Type    | Tabular, 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 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.                |

## O<sub>2</sub> Therapy

|                  |  |
|------------------|--|
| O <sub>2</sub> % | 15 - 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, O <sub>2</sub>       |
| Gas source requirement | Medical compressed oxygen |

### High-pressure O<sub>2</sub> 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<br>EN ISO5359:2008    |

### Low-pressure O<sub>2</sub> 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<br>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<br>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/cmH <sub>2</sub> O;<br>Adult reusable circuit (including inspiratory safety valve, adult reusable breathing tube, water collection cup, expiratory valve, Y-joint): ≤ 2 mL/cmH <sub>2</sub> O;<br>Pediatric disposable circuit (including inspiratory safety valve, pediatric disposable breathing tube, water collection cup, expiratory valve): ≤ 2 mL/cmH <sub>2</sub> O;<br>Pediatric reusable circuit (including inspiratory safety valve, pediatric reusable breathing tube, water collection cup, expiratory valve, Y-joint): ≤ 2 mL/cmH <sub>2</sub> O;<br>Neonate reusable circuit (including inspiratory safety valve, neonate reusable breathing tube, water collection cup, expiratory valve, Y-joint): ≤ 1 mL/cmH <sub>2</sub> O. |
| Inspiratory resistance | ≤ 6 cmH <sub>2</sub> O at the flow rate of 60 L/min (Adult);<br>≤ 6 cmH <sub>2</sub> O at the flow rate of 30 L/min (Pediatric);<br>≤ 6 cmH <sub>2</sub> O at the flow rate of 5  |



|                       |   |
|-----------------------|---|
|                       | L/min (Neonate).  |
| Expiratory resistance | ≤ 6 cmH <sub>2</sub> O at the flow rate of 60 L/min (Adult);<br>≤ 6 cmH <sub>2</sub> O at the flow rate of 30 L/min (Pediatric);<br>≤ 6 cmH <sub>2</sub> O at the flow rate of 5 L/min (Neonate). |

### Basic performance

|                           |  |
|---------------------------|--|
| Pressure monitoring range | -20~120 cmH <sub>2</sub> O   |
| Safety pressure of system | In ventilation state: ≤ 125cmH <sub>2</sub> O<br>In non-ventilation state or power failure or gas source failure (<0.12MPa): ≤ 14 cmH <sub>2</sub> O |

### Environmental specifications

|                     |   |
|---------------------|---|
| Temperature         | 5 - 40 °C (operating); -20 to 60 °C (storage and transport, O <sub>2</sub> 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)<br>280 min (when two new fully charged batteries are used in standard operating mode) |

### I/O

|                         |  |
|-------------------------|--|
| Communication interface | Rs232, Ethernet, VGA, USB port, Nurse call |
|-------------------------|--|

### Trolley MC100

|            |       |
|------------|-------|
| Dimensions |       |
| Weight     | 20 kg |

**\*Notice: Specifications subject to changes without prior notice. All rights reserved by Comen**