The SLE6000c NICU Ventilator Specifications

The SLE6000 is a full specification NICU infant care ventilation system. Compact in design, it offers conventional modes with additional options for Non-Invasive Ventilation (NIV), and High Flow Oxygen Therapy (HFOT).

SpO_2 and $EtCO_2$ monitoring options are supported with the addition of plug-in modules. OxyGenie® (Auto FiO_2) is an optional integration.

Core Invasive Ventilation

▶ CPAP (Dual limb, ET)

Inspiratory Time (Ti)	0.1 to 3.0 s
CPAP	0 to 35 mbar
PIP	0 to 65 mbar
O_2 Concentration	21 to 100%
▷ Additional Parameters	
RR Backup	1 to 150 BPM
Rise Time	0 to 3.0 s
Trigger Sensitivity with flow sensor:	0.2 to 20 l/min
without flow sensor:	1 to 100%

▶ PTV & PSV (Dual limb, ET)

Respiratory Rate (RR)	1 to 150 BPM
Inspiratory Time (Ti)	0.1 to 3.0 s
PEEP Pressure	0 to 35 mbar
PIP Pressure	0 to 65 mbar
Volume Targeted Ventilation (VTV)	(Added with VTV module) 2 to 300 ml †
O_2 Concentration	21 to 100%
▷ Additional Parameters	
Rise Time	0 to 3.0 s
Trigger Sensitivity with flow sensor:	0.2 to 20 l/min
without flow sensor:	1 to 100%
Termination Sensitivity (% of peak insp flow) (PSV only)	5 to 50%

▶ CMV (Dual limb, ET)

Respiratory Rate (RR)	1 to 150 BPM
Inspiratory Time (Ti)	0.1 to 3.0 s
PEEP	0 to 35 mbar
PIP	0 to 65 mbar
Volume Targeted Ventilation (VTV)	(Added with VTV module) 2 to 300 ml †
O_2 Concentration	21 to 100%
▷ Additional Parameters	
Rise Time	0 to 3.0 s

▶ SIMV (Dual limb, ET)

Respiratory Rate (RR)	1 to 150 BPM
Inspiratory Time (Ti)	0.1 to 3.0 s
PEEP	0 to 35 mbar
PIP	0 to 65 mbar
Volume Targeted Ventilation (VTV)	(Added with VTV module) 2 to 300 ml †
O_2 Concentration	21 to 100%
▷ Additional Parameters	
Rise Time	0 to 3.0 s
P Support	0 to 65 mbar
Trigger Sensitivity with flow sensor:	0.2 to 20 l/min
without flow sensor:	1 to 100%

Termination Sensitivity (% of peak insp flow)	5 to 50%

Termination Sensitivity parameter is not shown when pressure support (P Support) is off.

Non-Invasive Ventilation

▶ nCPAP D (Dual limb)
for passive nCPAP interfaces e.g. SLE Miniflow

Inspiratory Time (Ti)	0.1 to 3.0 s
CPAP	0 to 35 mbar
PIP	0 to 65 mbar
O_2 Concentration	21 to 100%
▷ Additional Parameters	
RR Backup	1 to 10 BPM
Rise Time	0 to 3.0 s
Trigger Sensitivity	1 to 100%

▶ nCPAP S (Single limb)
for active (fluidic-flip) nCPAP interfaces (e.g. SLE1000 generator, Infant Flow or First Breath™) and other single tube interfaces

Inspiratory Time (Ti)	0.1 to 3.0 s
CPAP	2 to 15 mbar
PIP	2 to 25 mbar
O_2 Concentration	21 to 100%
▷ Additional Parameters	
RR Backup	1 to 10 BPM
Trigger Sensitivity	1 to 100%

▶ NIPPV D (Dual limb)

Respiratory Rate (RR)	1 to 150 BPM
Inspiratory Time (Ti)	0.1 to 3.0 s
PEEP	0 to 35 mbar
PIP	0 to 65 mbar
O_2 Concentration	21 to 100%
▷ Additional Parameters	
Rise Time	0 to 3.0 s

▶ NIPPV Triggered (Dual limb)
for passive nCPAP interfaces e.g. SLE Miniflow

Respiratory Rate (RR)	1 to 150 BPM
Inspiratory Time (Ti)	0.1 to 3.0 s
PEEP	0 to 35 mbar
PIP	0 to 65 mbar
O_2 Concentration	21 to 100%
▷ Additional Parameters	
Rise Time	0 to 3.0 s
Trigger Sensitivity	1 to 100%

O_2 Therapy

▶ High Flow Oxygen Therapy (Single limb)

Flow Rate	2 to 30 l/min
O_2 Concentration	21 to 100%

Misc. Specifications

▶ Flow Sensor

Flow sensor type: (Electrically isolated)	10 mm dual-hot-wire anemometer. (Single-use or autoclavable versions).
Applied part	Type BF
Flow rate	0.2 to 30 l/min
Accuracy	±8% maximum
Dead space	1 ml
Weight	10 g

▶ Flow

Flow rate	0 to 99 l/min

▶ Volume

Expiratory tidal volume	0 to 999 ml
Expiratory minute volume	0 to 18 L

▶ Measured Parameters

Leak	0 to 99%
Respiratory rate	0 to 999 BPM
Compliance	0 to 99.9 ml/mbar
C20/C	0 to 9999
Resistance	0 to 999 mbar/(l/s)
Inspiratory time	0 to 9.99 s
Expiratory time	0 to 9.99 s
Vmin	0 to 99.99 l
Trigger resolution	1
Vte	0 to 99.9 ml
DC02	0 to 9999
I:E Ratio	1:9.9 to 9.9:1
Oxygen concentration	0 to 999%
Peak pressure	0 to 999 mbar
PEEP pressure	0 to 999 mbar
Mean pressure	-999 to 999 mbar
Delta P	9 to 999 mbar
Trending	Data logged @ 1 Hz

Above values are obtained under ATPD (ambient temperature and pressure, dry) conditions.

▶ Power AC

Mains voltage	100-240V / 50-60Hz
Power	115 VA
Fuses (x2)	T2.5AH 250V (5x20 mm)
Battery back-up	Typical 3+ hour battery life (in all modes) in normal use
Battery charging	Full charge: 18 hours 80% charge: 8 hours

▶ Power DC

Voltage	24V 4A

▶ Operating Environment

Temperature	+10ºC to +40ºC
Relative Humidity	10 to 90% (non-condensing)

† VTV control, when enabled, becomes Vte Target control.

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Misc. Specifications

▶ Dimensions

Size, ventilator only	w 330 mm x h 369 mm x d 548 mm
Height on pole	1310 mm
Weight (Ventilator only)	≤ 22 kg

▶ Pneumatic Connectors

Exhalation port	15 mm F / 22 mm M conical (ISO5356-1)
Proximal airway	5 mm non-conical
Fresh gas port	15 mm M conical (ISO5356-1)
Nebulizer port (on rear)	5 mm non-conical

▶ Classification (Electrical)

Type of protection against electric shock:	Class 1 Unit must be earthed.
Degree of protection against electric shock:	Type BF, applied part

▶ Connectors (Rear mounted)

RS232 & USB data ports
Display port
USB Power port for nebuliser
Nurse Call
24V DC input
SpO$_2$ & etCO$_2$
RJ45 Ethernet networking port

▶ IP Rating

Type of protection against ingress of water	IP21

▶ Environmental Storage Conditions

Ambient Temperature	-20ºC to +50ºC
Relative Humidity	10% to 90% non-condensing

▶ Sound levels

Sound pressure level	49 dBA

Optional Module Features

▶ SpO$_2$

Displayed parameters	Saturation (fraction of oxyhaemoglobin to functional haemoglobin), pulse rate, Signal IQ and plethysmogram
Trends	SpO$_2$ and Pulse rate for previous 14 days
Measuring method	Absorption spectrophotometry
Ventilator connector	ODU-type plug (red). Powered from ventilator.
Dimensions (mm)	24 (h) x 33 (w) x 92 (l)
Weight (excluding sensor)	0.122 kg

	Fractional SpO$_2$ (%)	Pulse Rate (BPM)
Display Range	0% - 100%	25 - 240 BPM
Calibration range	70% - 100%	25 - 240 BPM
No motion accuracy (rms)	± 2.0%	± 3.0 BPM
Motion accuracy (rms)	± 3.0%	± 5.0 BPM
Resolution	≤ 0.1%	≤ 1 BPM
Averaging time (seconds)	2-4, 4-6, 8, 10, 12, 14, 16	–

▶ EtCO$_2$

CO$_2$ units	User selectable (mmHg or kPa or Vol%)
EtCO$_2$ range	0-99.9 mmHg
EtCO$_2$ resolution	1 mmHg
CO$_2$ accuracy	0-38 mmHg: ± 2 mmHg 39-150 mmHg: ± (5% of reading + 0.08 x [reading - 39 mmHg])
CO$_2$ sampling flow rate	50 ml/min (+15 ml/min, -7.5 ml/min) flow measured by volume
Waveform sampling	20 samples/s
Initialisation time	40 s (typical, includes power-up and initialisation time)
Ventilator connector	ODU-type plug (yellow). Powered from ventilator.
Dimensions (mm)	70 (w) x 93.3 (l) x 50.3 (h)
Weight	240 g

▶ OxyGenie®

Controls	Adds additional (start/stop) option to FiO$_2$ parameter controller. Range selector in SpO$_2$ utilities menu. Ranges are: 90 - 94%, 91 - 95% (default), 92 - 96%, 94 - 98% Manual override (timed, for 30 seconds)
Waveforms	Additional SpO$_2$ screen can show any one ventilation parameter plus plethysmogram and trends of SpO$_2$ and FiO$_2$.
Alarms	Alarms automatically set on SpO$_2$ software, corresponding with target range (1% above high and 1% below low). Can be manually set as well. Alarm indications shown in Alarm bar. Alarm level indicators on SpO$_2$ and FiO$_2$ graphs.
Indicator	Status panel shows OxyGenie status such as 'Auto', 'Manual Override' (with countdown) or 'Waiting for Signal'.
Trends	Trending information for SpO$_2$ and FiO$_2$ can be shown simultaneously. Up to 14 days of data are stored for each parameter.

For further specifications & operating temperature, pressure and humidity ranges for SpO$_2$ and EtCO$_2$ please see User Manuals.

An IntelliBridge module is also available