



ESV-SPIRIT 1100C

Electronic ICU Ventilator



INTENSIVE CARES



Physical Specifications

Specifications

Dimensions(L*W*H)	336mm * 330mm * 345mm 664mm * 600mm * 1310mm (with Trolley)
Weight	Approximately 9.9kg (Main Unit) , Approximately 41.0kg (with Trolley)

Display

Specifications

Display Size	12.1inch-TFT Touch Screen
Display Resolution (H) x (V)	1280*800pixels
Brightness	Adjustable

Ventilation Specifications

Specifications

Patient Type	Adult, Pediatric, Neonatal
Invasive Ventilation Mode	• VCV (Volume Control Ventilation) • PCV (Pressure Control Ventilation) • VSIMV (Volume Synchronized Intermittent Mandatory Ventilation) • PSIMV (Pressure Synchronized Intermittent Mandatory Ventilation) • CPAP/PSV (Continuous Positive Airway Pressure/Pressure Support Ventilation) • PRVC (Pressure Regulated Volume Control) • V+SIMV (PRVC+SIMV) • BPAP (Bilevel Positive Airway Pressure) • APRV (Airway Pressure Release Ventilation) • Apnea Ventilation
Non-invasive Ventilation Mode	• PCV (Pressure Control Ventilation) • CPAP/PSV (Continuous Positive Airway Pressure/Pressure Support Ventilation) • BPAP (Bilevel Positive Airway Pressure) • APRV (Airway Pressure Release Ventilation) • PSIMV (Pressure Synchronized Intermittent Mandatory Ventilation)

Controlled Parameters

Specifications	Adult, Pediatric	Neonatal
O ₂ %	21–100%	21–100%
VT (Tidal Volume)	100–2000mL (Adult) 20–300mL (Pediatric)	2–300mL
f	1–80bpm	1–150bpm
f-SIMV	1–80bpm	1–150bpm
I:E	1:10 –4:1	1:10 –4:1
T-insp.	0.2–10s	0.20–10s
T-slope	0–2s	0–2s
T-high	0.2–30s	0.2–3s
T-low	0.2–30s	0.2–30s
T-pause	5%–60% , Off	5%–60% , Off
ΔP-insp.	5–60cmH ₂ O	3–60cmH ₂ O
ΔP-suppl.	0–60cmH ₂ O	0–60cmH ₂ O
P-high	0–60cmH ₂ O	0–60cmH ₂ O
P-low	0–45cmH ₂ O	0–25cmH ₂ O
PEEP	1–45cmH ₂ O , Off	1–25cmH ₂ O , Off
Flow Trigger	0.5–15L/min	0.1–5L/min
Pressure Trigger	–10 –(–0.5)cmH ₂ O	/
Exp%	10–85% , Auto	10–85% , Auto



Apnea Ventilation

Specifications

VT-apnea	Adult: 100–2000mL
	Pediatric: 20–300mL
	Neonatal: 2–300mL
Δ P-apnea	5–60cmH ₂ O
f-apnea	1–80bpm
Apnea T-insp.	0.2–10s

Sigh

Specifications

Sigh Switch	On, Off
Interval	20s–180min
Cycles Sigh	1–20
Δ int.PEEP	0– 45 cmH ₂ O , Off

Synchronized Tube Resistance Compliance

Specifications

Tube Type	ET Tube, Trach Tube, Disable STRC
Tube I.D.	Adult: 5.0–12.0mm
	Pediatric: 2.5–8.0mm
Compensate	0–100%
Expiration Compensation Switch	On, Off

Monitored Parameters

Numeric

Paw	Vte	Ri
P-peak	VTi	C-dyn.
P-plat.	VT _e -spn.	C-stat.
P-mean	VT _e /IBW	RC-exp.
PEEP	FiO ₂	WOB
MV	f-total	RSBI
MV-leak	I:E	Continuous Flow (O ₂ Therapy)
MV-sp _n .	Re	

Real Time Graphics

Pressure-time Waveform	Pressure-volume Loop
Flow-time Waveform	Flow-time Loop
Volume-time Waveform	Pressure-flow Loop

Alarm Settings

Specifications	Type	Adult	Pediatric	Neonatal
Tidal Volume	High	110–4000mL, Off	25–600mL, Off	4–600mL, Off
	Low	50–4000ml, Off	10–600mL, Off	1–590mL, Off
Minute Volume	High	0.2–100.0L/min	0.2–60.0L/min	0.12–50.0L/min
	Low	0.1–50.0L/min	0.1–30.0L/min	0.02–30.0L/min
Airway Pressure	High	10–65cmH ₂ O	10–65cmH ₂ O	10–65cmH ₂ O
	Low	10–63cmH ₂ O , Off	Off , 10–63cmH ₂ O	Off , 10–63cmH ₂ O
Frequency	High	1– 90bpm , Off	1– 90bpm , Off	1~160bpm , Off
	Low	1– 88bpm , Off	1– 88bpm , Off	1~158bpm , Off
O ₂ Concentration	High	20–100%	20–100%	20–100%
	Low	18–98%	18–98%	18–98%
Apnea Alarm Time	Low	5–60s	5–60s	5–60s



O₂ Therapy

Specifications	O ₂ %	Flow
Controlled Parameters	21–100% (Increments of 1%)	4–60L/min
Controlled Accuracy	± (3vol.% +1% of Setting)	± (2L/min+10% of Setting) (BTPS)

Trend & Record

Specifications	
Type	Tabular, Graphic
Length	72 hours
Content	Monitor Parameters
Max Log	20000
Screen Capture	500

Environmental Specifications

Specifications	Operating	Storage and transport
Temperature	5–40°C	–20 – 60°C , O ₂ Sensor: –20 – 50°C
Relative Humidity	10–95%	10–95%
Barometric Pressure	62–106kPa	50–106kPa

Gas Supply

Specifications	
Gas Supply	Medical-grade Oxygen
Pipe Connector	NIST or DISS
Gas Supply Pressure	280–600kPa

Power & Battery Backup

Specifications	
External AC Power Supply Input Voltage	100–240V
Input Frequency	50/60Hz
Input Current	2.5A Max
Fuse	T3.15AH/250V
Number of Batteries	One or Two (Optional)
Battery Type	Build-in Lithium-ion Battery, 14.4VDC, 6900mAh
Battery Running Time	3 hours (1 Qty Battery) 6 hours (2 Qty Battery)

Communication interface

Specifications	
Communication Interface	HDMI, RS232, USB, Nurse call, CO ₂ Module Connector, SPO ₂ Module Connector

Value Added Functions

Specifications	
100%O ₂	
Suction	
Nebulization	
Manual Breath	
Inspiratory Hold	
Expiratory Hold	
PEEPi	
P0.1	
NIF	
PV Tool	



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