SV300 Pro

Ventilator

Physical Specification

Dimensions and weight	
Dimensions (HxWxD)	354 mm×315 mm×255 mm (Excluding the trolley) 1365 mm×526 mm×544 mm (Including the trolley)
Weight	Approximately 10kg (Excluding the trolley) Approximately 30kg (Including the trolley)

Display

Screen	12.1" Capacitive TFT touch screen
Resolution (HxV)	1280×800 pixels
Brightness	Adjustable

Communication interface

Communication interface	
	RS-232, Nurse call connector, VGA connector, USB Port, Ethernet, wireless network

Ventilation Specifications

Patient Type	Adult, Pediatric, Neonate
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)
	DuoLevel (Duo Level Ventilation)
	CPAP (Continuous Positive Airway Pressure)
	PSV (Pressure Support Ventilation)
	VS (Volume Support)
	APRV (Airway Pressure Release Ventilation)
	PRVC (Pressure Regulated Volume Control)
	PRVC-SIMV (PRVC-Synchronized Intermittent Mandatory Ventilation)
	AMV (Adaptive Minute Ventilation)
	CPRV (Cardio-Pulmonary Resuscitation Ventilation)
	nCPAP (Nasal Continuous Positive Airway Pressure ventilation)
	NIV (Non-invasive ventilation)
	Apnea Ventilation

Controlled Parameters

O_2%	21 to 100 vol.%
TV (Tidal Volume)	Adult: 100 to 2000 mL Pediatric: 20 to 300 mL Neonate: 2 to 100 mL
MV%	25% to 350%
f	Adult / Pediatric: 1 to 100 /min Neonate: 1 to 150 /min
fsimv (Ventilation frequency in SIMV mode)	1 to 60 /min
I:E	1:10 to 4:1
Tinsp	0.10 to 10.00 s
Tslope (Time of pressure rising)	0.00 to 2.00 s
Thigh	0.10 to 30.00 s
Tlow	0.20 to 30.00 s
Tpause	OFF, 5% to 60%
Flow Pattern	Square, 100% Decelerating, 50% Decelerating
ΔPinsp	1 to 80 cmH_2O
ΔPsupp	0 to 80 cmH_2O
Phigh	0 to 80 cmH_2O
Plow	0 to 50 cmH_2O
PEEP	0 to 50 cmH_2O
Flow trigger	OFF, Adult/Pediatric: 0.5 to 20.0 L/min; Neonate: 0.1 to 5.0 L/min
Pressure trigger	OFF, -20.0 to -0.5 cmH_2O
Exp% (Expiration termination level)	Auto, 1% to 85%
Neg.Plimit (CPRV)	-30 to 0 cmH_2O

Apnea Ventilation

TVapnea	Adult: 100 to 2000 mL Pediatric: 20 to 300 mL Neonate: 2 to 100 mL
ΔPapnea	1 to 80 cmH_2O
fapnea	Adult / Pediatric: 1 to 80 bpm Neonate: 1 to 150 bpm
Apnea Tinsp	0.10 to 10.00 s

Sigh

Sigh Switch	ON, OFF
Interval	20 s to 180 min
Cycles Sigh	1 to 20
Δint. PEEP	OFF, 1 to 50 cmH_2O

Automatic Tube Resistance Compensation

Tube Type	ET Tube, Trach Tube, Disable ATRC
Tube I.D.	Adult: 5.0 to 12.0 mm Pediatric: 2.5 to 8.0 mm Neonate: 2.5 to 5.0 mm
Compensate	0 to 100 %
Expiration Compensation Switch	ON, Off

O_2 Therapy

O_2%	21 to 100 vol.%
Flow	Adult/Pediatric: 2 to 80 L/min Neonate : 2 to 20 L/min

Automatic Leakage Compensation

Maximum leakage compensation flow

	Adult: 65L/min
	Pediatric: 45L/min
	Neonate: 15L/min

IntelliCycle

Applicable patient type	
	Adult / Pediatric
Automatically adjust parameters	
	Trigger, Tslope, Exp%
IntelliCycle Switch	ON, Off

Monitored parameters

Airway pressure range	Ppeak, Pplat, Pmean
	(Range -20 to 120 cmH_2O)
	PEEP (Range 0 to 120 cmH_2O)
Tidal volume range	TVi, TVe, TVe spn (Range 0 to 4000 mL)
Frequency range	ftotal, fmand, fspn (Range 0 to 200 /min)
Minute volume range	MV, MVspn, MVleak
	(Range Adult/Pediatric: 0 to 100 L/min
	Neonate: 0 to 30 L/min)
Leak%	0 to 100%
Resistance	Rinsp, Rexp (Range 0 to 600 cmH_2O/L/s)
Compliance	Cstat, Cdyn (Range 0 to 300 mL/cmH_2O)
Inspired Oxygen (FiO_2)	15 to 100 vol.%
RSBI	0 to 9999 1/(min*L)
WOB	0 to 100 J/min
P0.1	-20 to 0 cmH_2O
NIF	-45 to 0 cmH_2O
PEEPi	0 to 80 cmH_2O
RCexp	0 to 10 s
TVe/IBW	0 to 50 mL/kg
I:E	100:1 to1:150
Tinsp	0.00 to 60.00s
Waveforms	Airway pressure-time, Flow-time, Volume-time, CO_2-time , Pleth-time
Loops	Paw-Volume, Flow-Volume, Paw-Flow, Volume-CO_2

Alarm settings

Tidal Volume	High	Neo: Off, 3 to 200 mL
		Ped: Off, 25 to 600 mL
		Adu: Off,110 to 4000 mL
	Low	Neo: Off, 1 to 200 mL
		Ped: Off, 10 to 600 mL
		Adu: Off, 50 to 4000 mL
Minute Volume	High	Neo: 0.02 to 30.0 L/min
		(can be set to Off in nCPAP)
		Ped: 0.2 to 60.0 L/min
		Adu: 0.2 to 100.0 L/min
	Low	Neo: 0.01 to 15 L/min
		Ped: 0.1 to 30.0 L/min
		Adu: 0.1 to 50.0 L/min
		(can be set to Off in NIV)
Airway pressure	High	10 to 85 cmH_2O
Frequency	High	OFF, 1 to 160 /min
Inspired Oxygen (FiO_2)	High	Auto, FiO_2 exceeds the alarm limit for at leastn30 s, internal alarm limit: set value+max (7 vol.% or set value X10%) or 100 vol.%, whichever is lower.
	Low	Auto, FiO_2 lower than the alarm limit for at least 30 s, internal alarm limit: setvalue-max (7 vol.% or set valueX10%) or 18%, whichever is greater.
Apnea alarm time	Low	5 to 60 s (can be set to Off in nCPAP)

Trend

Type	Tabular, Graphic
Length	72 hours
Content	Monitor Parameters, Setting Parameters (Setting Ventilation mode and Parameters)

Log

Type	Alarm, Operation
Max number	5000

Ventilator components

O_2 sensor	
Type	Galvanic fuel cell
Response time	< 15 s

Neonatal flow sensor

Flow Range	0.2 to 30 L/min
Dead space	<0.75 mL
Resistance	0.9 cmH_2O@10L/min

Sidestream CO_2 Module

Displayed numeric	$EtCO_2$
Measurement range	0 to 99 mmHg
Resolution	1 mmHg
Waveforms	CO_2-time
$EtCO_2$ High alarm limit	2 to 99 mmHg
$EtCO_2$ Low alarm limit	0 to 97 mmHg

Mainstream CO_2 Module

Displayed numerics	$EtCO_2$, $VeCO_2$, $ViCO_2$, Vtalv, VDaw, VDaw/TVe, SlopeCO_2, VCO_2
Measurement range	0 to 150 mmHg
Resolution	1 mmHg
Waveforms / Loop	CO_2 - time, Volume - CO_2
System response time	< 2.0 s
$EtCO_2$ High alarm limit	2 to 150 mmHg
$EtCO_2$ Low alarm limit	0 to 148 mmHg

SpO_2 module

Displayed numeric	SpO_2, PR, PI
SpO_2 Measurement range	
	0 to 100 %
PR measurement range	20 to 254 1/min
PI measurement range	0.05 to 20 %
Waveform	Pleth
SpO_2 High alarm limit	2 to 100 %
SpO_2 Low alarm limit	0 to 98 %
SpO_2 Desat alarm limit	0 to 98 %
PR High alarm limit	17 to 300 1/min
PR Low alarm limit	15 to 298 1/min

Operation Data

Environmental specifications	
Temperature	5 to 40°C(operating); -20 to 60°C(storage)
Relative Humidity	10 to 95 % (operating); 10 to 95 % (storage)
Barometric Pressure	62 to 106 kPa (operating); 50 to 106 kPa (storage)

Gas supply

Gas type	O_2
Pipe Connector	NIST, DISS
Gas supply pressure	280 to 600 kPa

Air supply (Blower)

Maximum output flow	≥ 210 L/min (BTPS)*

Maximum output pressure	
	≥ 80 cmH_2O
Maintenance interval	8 years

Power and Battery Backup

External AC power supply

Power input voltage	100 to 240 V
Power input frequency	50/60 Hz
Power input current	2.7 to 1.1 A
Fuse	T3.15 AH/250 V

External DC power supply

Power input voltage	12 V
Power input current	15 A

Internal battery

Number of batteries	One or Two
Battery type	Build-in Lithium-ion battery, 14.8 VDC, 5800 mAh
Battery run time	180 min (Powered by one new fully-charged battery in standard working condition)* 360 min (Powered by two new fully-charged battery in standard working condition) 150 min (powered by one aged fully-charged battery according to the Table 201.102 with tidal volume 500 ml or 150 ml in ISO 80601-2-12); 120 min (powered by one aged fully-charged battery according to the Table 201.102 with tidal volume 30 ml in ISO 80601-2-12); 300 min (powered by two aged fully-charged batteries according to the Table 201.102 with tidal volume 500 ml or 150 ml in ISO 80601-2-12); 240 min (powered by two aged fully-charged batteries according to the Table 201.102 with tidal volume 30 ml in ISO 80601-2-12).

Special Functions and procedures

Sigh
O_2↑
Suction
Nebulization
Manual breath
Inspiratory hold
Expiratory hold
PEEPi
P0.1
NIF
PV-Tool
Weaning Tool
PulmoSight
Lung Recruitment Tool (SI)

*BTPS =Body Temperature and Pressure Saturated
*The standard work condition is: Ventilation mode:P-A/C; ΔPinsp:10 cmH_2O; f:10/min; Tslope:0.2s;Tinsp:2s; O_2%:21 Vol.%; PEEP:5 cmH_2O ; R:20 cmH_2O/L/s ; C:20 mL/cmH_2O ; Gas supply nominal work pressure: 400±100 kPa.

Some of functions marked with an asterisk may not be available. Please contact your local Mindray sales representative for the most current information.

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