

SV300

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" Color active matrix TFT touch screen
Resolution (HxV)	1280×800 pixels
Brightness	Adjustable

Communication interface

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



T _{insp}	0.10 to 10.00 s
T _{slope} (Time of pressure rising)	0.00 to 2.00 s
T _{high}	0.10 to 30.00 s
T _{low}	0.20 to 30.00 s
T _{pause}	OFF, 5% to 60%
Flow Pattern	Square, 100% Decelerating, 50% Decelerating
ΔP _{insp}	1 to 80 cmH ₂ O
ΔP _{supp}	0 to 80 cmH ₂ O
Phigh	0 to 80 cmH ₂ O
Plow	0 to 50 cmH ₂ O
PEEP	0 to 50 cmH ₂ O
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 ₂ O
Exp% (Expiration termination level)	Auto, 1% to 85%
Neg.Plimit (CPRV)	-30 to 0 cmH ₂ O

Apnea Ventilation

TV _{apnea}	Adult: 100 to 2000 mL Pediatric: 20 to 300 mL Neonate: 2 to 100 mL
ΔP _{apnea}	1 to 80 cmH ₂ O
f _{apnea}	Adult / Pediatric: 1 to 80 bpm Neonate: 1 to 150 bpm
Apnea T _{insp}	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 ₂ O

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

O₂ 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
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	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 ₂ O) PEEP (Range 0 to 120 cmH ₂ O)
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 ₂ O/L/s)
Compliance	Cstat, Cdyn (Range 0 to 300 mL/cmH ₂ O)
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 ₂ O
NIF	-45 to 0 cmH ₂ O
PEEPi	0 to 80 cmH ₂ O
RCexp	0 to 10 s
TVe/IBW	0 to 50 mL/kg
I:E	100:1 to 1:150
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 ₂ O
Frequency	High OFF, 1 to 160 /min
Inspired Oxygen (FiO ₂)	High Auto, FiO ₂ exceeds the alarm limit for at least 30 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	Calvanic 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 ₂ O@10L/min

Sidestream CO₂ 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 CO₂ 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

SpO₂ 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 cmH₂O
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)

Special Functions and procedures

Sigh
O₂↑
Suction
Nebulization
Manual breath
Inspiratory hold
Expiratory hold
PEEPi
P0.1
NIF
PV-Tool
PulmoSight
Lung Recruitment Tool (SI)

*BTPS =Body Temperature and Pressure Saturated

*The standard work condition is: Ventilation mode:P-A/C;

ΔP_{insp}:10 cmH₂O; f:10/min; T_{slope}:0.2s;T_{insp}:2s; O₂ %:21 Vol. %;

PEEP:5 cmH₂O ; R:20 cmH₂O/L/s ; C:20 mL/cmH₂O ; 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.

www.mindray.com

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