

# SV600

## Ventilator



### Physical Specification

#### Dimensions and weight

Dimensions (HxWxD)	1395mmX530mmX674mm (Including trolley and backup air supply) 906mmX401mmX298mm (Including backup air supply and not trolley) 651mmX401mmX298mm (Excluding trolley and backup air supply)
Weight	Approximately 45kg (including trolley and backup air supply)

#### Display

Screen	15.6" Color active matrix TFT touch screen
Resolution (HxV)	1920X1080 pixels
Brightness	Adjustable

#### Trolley

Dimensions (HxWxD)	760mmX530mmX980mm
Weight	17 kg

#### Communication interface

Communication interface	RS-232, Nurse call connector, VGA connector, USB PortX4, 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) PSV-S/T (Pressure Support Ventilation-Spontaneous/Timed) nCPAP (Nasal Continuous Positive Airway Pressure ventilation) NIV (Non-invasive ventilation) Apnea Ventilation

#### Controlled Parameters

O <sub>2</sub> %	21 to 100 vol.%
TV (Tidal Volume)	Adult: 100 to 4000 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 <sub>insp</sub>	0.10 to 10.00 s
T <sub>slope</sub> (Time of pressure rising)	0.00 to 2.00 s
Thigh	0.10 to 30.00 s
T <sub>low</sub>	0.20 to 30.00 s
T <sub>pause</sub>	OFF, 5% to 60%
Flow	Adult: 6 to 180 L/min Pediatric: 6 to 30 L/min Neonate: 2 to 30 L/min
Flow Pattern	Square, 100% Decelerating, 50% Decelerating
ΔP <sub>insp</sub>	1 to 100 cmH <sub>2</sub> O
ΔP <sub>supp</sub>	0 to 100 cmH <sub>2</sub> O
Phigh	0 to 100 cmH <sub>2</sub> O
P <sub>low</sub>	0 to 50 cmH <sub>2</sub> O
PEEP	0 to 50 cmH <sub>2</sub> 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 <sub>2</sub> O
Exp% (Expiration termination level)	Auto, 1% to 85%
Neg.Plimit (CPRV)	-30 to 0 cmH <sub>2</sub> O
<b>Apnea Ventilation</b>	
TV <sub>apnea</sub>	Adult: 100 to 4000 mL Pediatric: 20 to 300 mL Neonate: 2 to 100 mL
ΔP <sub>apnea</sub>	1 to 100 cmH <sub>2</sub> O
f <sub>apnea</sub>	Adult / Pediatric: 1 to 100 bpm Neonate: 1 to 150 bpm
Apnea T <sub>insp</sub>	0.10 to 10.00 s
<b>Sigh</b>	
Sigh Switch	ON, OFF
Interval	20 s to 180 min
Cycles Sigh	1 to 20
Δint. PEEP	OFF, 1 to 40 cmH <sub>2</sub> 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

Compensate	Neonate: 2.5 to 5.0 mm 1 to 100 %
Expiration Compensation Switch	ON, Off
<b>O<sub>2</sub> Therapy</b>	
O <sub>2</sub> %	21 to 100 vol.%
Flow	Adult/Pediatric: 2 to 80 L/min Neonate : 2 to 20 L/min
<b>Automatic Leakage Compensation</b>	
Maximum leakage compensation flow	Adult: 65L/min Pediatric: 45L/min Neonate: 15L/min
<b>IntelliCycle</b>	
Applicable patient type	Adult / Pediatric
Automatically adjust parameters	Trigger, Tslope, Exp%
IntelliCycle Switch	ON, Off
<b>Monitored parameters</b>	
Airway pressure range	Ppeak, Pplat, Pmean (Range -20 to 120 cmH <sub>2</sub> O) PEEP (Range 0 to 120 cmH <sub>2</sub> O)
Tidal volume range	TVi, TVe, TVe spn (Range 0 to 6000 mL)
Frequency range	ftotal, fmand, fspn (Range 0 to 200 /min)
Minute volume range	MVi, MVe, 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 <sub>2</sub> O/L/s)
Compliance	Cstat, Cdyn (Range 0 to 300 mL/cmH <sub>2</sub> O)
Inspired Oxygen (FiO <sub>2</sub> )	15 to 100 vol.%
RSBI	0 to 9999 1/(min*L)
WOB	WOBtot, WOBvent, WOBimp, WOBpat (Range: 0 to 100 J/min)
P0.1	-20 to 0 cmH <sub>2</sub> O
NIF	-45 to 0 cmH <sub>2</sub> O
PEEPi	0 to 120 cmH <sub>2</sub> O
Vtrap	0 to 4000 mL
RCexp	0 to 10 s
TVe/IBW	0 to 50 mL/kg
I:E	150:1 to 1:150
Tinsp	0.00 to 60.00s
PIF (peak inspiratory flow)	Adult/Pediatric: 0 to 300 L/min Neonate: 0 to 30 L/min
PEF (peak expiratory flow)	Adult/Pediatric: 0 to 180 L/min Neonate: 0 to 30 L/min
EEF (end expiratory flow)	Adult/Pediatric: 0 to 180 L/min Neonate: 0 to 30 L/min
C20/C	0.00 to 5.00
Pdrive	0~120 cmH <sub>2</sub> O
Ccw	0~300 mL/ cmH <sub>2</sub> O
Clung	0~300 mL/ cmH <sub>2</sub> O
Transpulmonary pressure range	Ptpl, PtpE, ΔPtp, ΔPes (Range -99 to 99 cmH <sub>2</sub> O)
Auxiliary pressure range	Pesl, PesE, Paux2l, Paux2E (Range -40 to 120 cmH <sub>2</sub> O)

Waveforms	Airway pressure-time, Flow-time, Volume-time, CO <sub>2</sub> -time , Pleth-time
Loops	Paw-Volume, Flow-Volume, Paw-Flow, Volume-CO <sub>2</sub>

### Alarm settings

Tidal Volume	High Neo: Off, 3 to 200 mL Ped: Off, 25 to 600 mL Adu: Off, 110 to 6000 mL Low Neo: Off, 1 to 195 mL Ped: Off, 10 to 595 mL Adu: Off, 50 to 5995 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 105 cmH <sub>2</sub> O Low OFF, 1 to 100 cmH <sub>2</sub> O
Frequency	High OFF, 2 to 160 /min Low OFF, 1 to 159 /min
Inspired Oxygen (FiO <sub>2</sub> )	High FiO <sub>2</sub> 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 FiO <sub>2</sub> lower than the alarm limit for at least 30 s, internal alarm limit: set value-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)
Other Alarms	Low battery voltage Gas supply pressure low Airway obstruction Tube disconnected PEEP too high

### Trend

Type	Tabular, Graphic
Length	96 hours
Content	Monitor Parameters, Setting Parameters (Setting Ventilation mode and Parameters)

### Log

Type	Alarm, Operation
Max number	5000

### Screen Capture

Max number	50 pictures
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### Ventilator components

O <sub>2</sub> sensor	
Type	Calvanic fuel cell, paramagnetic sensor
Response time	< 23 s

### Neonatal flow sensor

Flow Range	0.2 to 30 L/min
Dead space	<0.75 mL
Resistance	0.9 cmH <sub>2</sub> O@10L/min

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

Displayed numeric	EtCO <sub>2</sub>
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Measurement range	0 to 152 mmHg
Resolution	1 mmHg
Waveforms	CO <sub>2</sub> -time
Sampling rate	Adult/Pediatric: 120 mL/min Neonate: 90 mL/min
System response time	Adult/ Pediatric: <5.5 s @ 120 mL/min Neonatal: <4.5 s @ 90 mL/min
Rise time	Adult/Pediatric: <300 ms @120 mL/min Neonatal : <330 ms @90 mL/min
Water trap cleaning time	Adult/Pediatric: ≥26 h @120 mL/min Neonatal: ≥35 h @90 mL/min
EtCO <sub>2</sub> High alarm limit	2 to 152 mmHg
EtCO <sub>2</sub> Low alarm limit	0 to 150 mmHg

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

Displayed numerics	EtCO <sub>2</sub> , VeCO <sub>2</sub> , ViCO <sub>2</sub> , MVCO <sub>2</sub> , Vtalv, MValv, VDaw, VDaw/TVe, SlopeCO <sub>2</sub> , VDalv, VDphy, VDphy/TVe, OI, P/F, VCO <sub>2</sub>
Measurement range	0 to 150 mmHg
Resolution	1 mmHg
Waveforms / Loop	CO <sub>2</sub> - time, Volume - CO <sub>2</sub>
System response time	< 2.0 s
EtCO <sub>2</sub> High alarm limit	2 to 150 mmHg
EtCO <sub>2</sub> Low alarm limit	0 to 148 mmHg

### SpO<sub>2</sub> module

Displayed numeric	SpO <sub>2</sub> , PR, PI
SpO <sub>2</sub> Measurement range	0 to 100 %
PR measurement range	20 to 300 1/min
PI measurement range	0.05 to 20 %
Waveform	Pleth
SpO <sub>2</sub> High alarm limit	2 to 100 %
SpO <sub>2</sub> Low alarm limit	0 to 98 %
SpO <sub>2</sub> 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	10 to 40°C(operating); -20 to 60°C(storage)
Relative Humidity	10 to 95 % (operating); 10 to 95 % (storage)
Barometric Pressure	50 to 106 kPa (operating); 50 to 106 kPa (storage)

### Gas supply

Gas type	O <sub>2</sub> and Air
Pipe Connector	NIST, DISS
Gas supply pressure	0.28 to 0.65MPa
Peak flow in case of single supply gas	≥ 180 L/min (BTPS)*
Loss of gas supply	In the event of a gas supply failure, automatically switches over to the other gas supply available, so that the patient gets the preset volume and pressure

### Backup air supply (Blower)

Maximum output flow	≥ 200 L/min (BTPS)*
Maximum output pressure	≥ 80 cmH <sub>2</sub> O

### Power and Battery Backup

Power input voltage	100 to 240 V
Power input frequency	50/60 Hz
Power input current	2.8 to 1.2 A

Fuse	220V/5.0A
Number of batteries	One or Two
Battery type	Build-in Lithium-ion battery, 11.3 VDC, 5600 mAh
Battery run time	90 min (Powered by one new fully-charged battery in standard working condition)* 180 min (Powered by two new fully-charged battery in standard working condition)

### Special Functions and procedures

100% O<sub>2</sub>  
Suction  
Nebulization  
Manual breath  
Inspiratory hold  
Expiratory hold  
PulmoSight  
PEEPi  
P0.1 NIF  
PV-Tool Weaning Tool  
Lung Recruitment Tool (SI)  
Alveolus ventilation calculation  
Auxiliary Pressure measurement  
Pes Catheter Position

\*BTPS =Body Temperature and Pressure Saturated

\*The standard work condition is: Ventilation mode:V-A/C; TV:500 mL; f:10/min; T<sub>insp</sub>:2 s ; O<sub>2</sub> %:40 Vol.%; PEEP:3 cmH<sub>2</sub>O ; R:5 cmH<sub>2</sub>O/L/s ; C:50 mL/cmH<sub>2</sub>O ; Gas supply: O<sub>2</sub> and Air Pipeline gas supply, nominal work pressure: 400±100 kPa.

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**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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P/N:ENG-SV800 Datasheet -210285X4P-20210501

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