SV800

Ventilator

Technical Specification

Physical Specification

Dimensions and weight

Dimensions (HxWxD)	1425mmX530mmX647mm (Including the trolley,including backup air supply) 936mmX473mmX298mm (Excluding the trolley,including backup air supply)) 681mmX473mmX298mm (Excluding the trolley,excluding backup air supply)
Weight	Approximately 48kg (including the trolley,including backup air supply)

Display

Screen	18.5″Color active matrix TFT touch screen
Display Resolution (H)x(V)	1920X1080 pixels
Brightness	Adjustable

Trolley

Dimensions	760mm(depth)X530mm(width)X980mm(height)
Weight	17 kg

Communication interface

Communication interface	RS-232, Nurse call connector, VGA connector, USB PortX4, Ethernet

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_2%	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 (Ventilation frequency)	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 (Inspiratory time)	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	Adult: 6 to 180 L/min Pediatric: 6 to 30 L/min Neonate: 2 to 30 L/min
ΔPinsp	1 to 100 cmH_2O
ΔPsupp	0 to 100 cmH_2O
Phigh	0 to 100 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, 5% to 85%
Base flow	Automatic adjustment (3-40L/min in invasive mode, 10-65L/min in non-invasive mode)
Neg.Plimit (in CPRV mode)	-30 to 0 cmH_2O

Apnea Ventilation

TVapnea	Adult: 100 to 4000 mL Pediatric: 20 to 300 mL Neonate: 2 to 100 mL
ΔPapnea	1 to 100 cmH_2O
fapnea	Adult / Pediatric: 1 to 100 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 40 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	1 to 100 %
Expiration Compensation Switch	ON, Off

O_2 Therapy

O_2%	21 to 100 vol.%
Flow	Adult: 2 to 60 L/min Pediatric: 2 to 25 L/min

Leakage Compensation

Maximum leakage compensation flow	Adult: 65L/min Pediatric: 45L/min Neonate: 15L/min

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 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_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	WOBtot, WOBvent, WOBimp, WOBpat (Range: 0 to 100 J/min)
P0.1	-20 to 0 cmH_2O
NIF	-45 to 0 cmH_2O
PEEPi	0 to 120 cmH_2O
Vtrap	0 to 4000 mL
RCexp	0 to 10 s
TVe/IBW	0 to 50 mL/kg
I:E	150:1 to1:150
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
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 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_2O
	Low	OFF, 1 to 100 cmH_2O
Frequency	High	OFF, 2 to 160 /min
	Low	OFF, 1 to 159 /min
Inspired Oxygen (FiO_2)	High	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	FiO_2 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	20 pictures

Ventilator components

O_2 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_2O@10L/min

SideStream CO_2 Module

Displayed numeric	$EtCO_2$
$EtCO_2$ measurement range	0 to 152 mmHg
Resolution	1 mmHg
Waveforms	CO_2-time
Sampling rate	Adult/Pediatric: 120 mL/min Neonate: 90 mL/min
System response time	Using Adult/ Pediatric water trap, Adult/Pediatric sampling line: ＜5.5 s @ 120 mL/min Using Neonatal water trap, Neonatal sampling line:＜4.5 s @ 90 mL/min
Rise time	Adult/Pediatric water trap, sampling line: ＜300 ms @120 mL/min Neonatal water trap, sampling line: ＜330 ms @90 mL/min
Water trap cleaning time	Adult/Pediatric water trap: ≥26 h @120 mL/min Neonatal water trap: ≥35 h @90 mL/min
$EtCO_2$ High alarm limits	2 to 152 mmHg
$EtCO_2$ Low alarm limits	0 to 150 mmHg

MainStream CO_2 Module

Displayed numerics	$EtCO_2$, $VeCO_2$, $ViCO_2$, $MVCO_2$, Vtalv, MValv, VDaw, VDaw/TVe, $SlopeCO_2$, VDalv, VDphy, VDphy/TVe, OI, P/F, VCO_2,
$EtCO_2$ 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 limits	2 to 150 mmHg
$EtCO_2$ Low alarm limits	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 300 1/min
PI measurement range	0.05 to 20 %
Waveform	Pleth
SpO_2 High alarm limits	2 to 100 %
SpO_2 Low alarm limits	0 to 98 %
SpO_2 Desat alarm limits	0 to 98 %
PR High alarm limits	17 to 300 1/min
PR Low alarm limits	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_2 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_2O

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_2
Suction
Nebulization
Manual breath
Inspiratory hold
Expiratory hold
PEEPi
P0.1
NIF
PV-Tool
Weaning Tool
Lung Recruitment Tool (SI)
Alveolus ventilation calculation
Auxiliary Pressure measurement

* BTPS =Body Temperature and Pressure Saturated
* The standard work condition is: Ventilation mode:V-A/C ; TV:500 mL; f:10 /min; Tinsp:2 s ; O_2 %:40 Vol.%; 2 2
PEEP:3 cmH_2O ; R:5 cmH_2O/L/s ; C:50 mL/cmH_2O ; Gas supply: O_2 and Air Pipeline 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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