SV800

Ventilator

Physical Specification

Dimensions and weight	
Dimensions (HxWxD)	1425mmX530mmX647mm (Including trolley and backup air supply) 936mmX473mmX298mm (Including backup air supply and not trolley) 681mmX473mmX298mm (Excluding trolley and backup air supply)
Weight	Approximately 48kg (including trolley and backup air supply)

Display

Screen	18.5" 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

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	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	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
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, 1% to 85%
Neg.Plimit (CPRV)	-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/ 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 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
MPrs	0.00~100.00 J/min
Pdrive	0~120 cmH_2O
Ccw	0~300 mL/cmH_2O
Clung	0~300 mL/cmH_2O
Transpulmonary pressure range	
	PtpI, PtpE, ΔPtp, ΔPes (Range -99 to 99 cmH_2O)
Auxiliary pressure range	
	PesI, PesE, Paux2I, Paux2E (Range -40 to 120 cmH_2O)
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 leastn30 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	50 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	$EtCO_2$

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	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
$EtCO_2$ High alarm limit	2 to 152 mmHg
$EtCO_2$ Low alarm limit	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
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 300 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	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
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; Tinsp:2 s ; O_2 %:40 Vol.%; 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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