

Monitor Accuracy	
FiO ₂	± (2.5 vol. % + 2.5 % of the actual reading)
Flow	± (2 L/min + 10 % of the actual reading) (BTPS)
Log	
Type	Alarm, Operation
Max number	5000
O₂ Sensor	
Type	Galvanic fuel cell
Response time	< 15 s
Communication interface	
Communication interface	Rs232, Ethernet, VGA, USB port, Nurse call
Gas supply	
Gas type	O ₂
Pipe Connector	NIST or DISS
Gas supply pressure	280 - 600 kPa
Peak flow in case of single supply gas(air)	≥ 210 L/min (BTPS)*1
Operation Data	
Environmental specifications	
Temperature	5 - 40 °C (operating); -20 to 60 °C (storage and transport, O ₂ sensor: -20 to 50°C)
Relative Humidity	10 - 95 % (operating); 10 - 95 % (storage and transport)
Barometric Pressure	62 - 106 kPa (operating); 50 -106 kPa (storage and transport)
Power and Battery Backup	
External AC power supply	
Input voltage	100 - 240 V
Input frequency	50/60 Hz
Input current	2.7 - 1.1 A
Fuse	T3.15 AH/250 V
External DC power supply	
Input voltage	12 V
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)*2 360 min (Powered by two new fully - charged battery in standard working condition)
Trolley	
Dimensions	1039 mm*528 mm*544 mm
Weight	Approximately 20 kg
Special Functions and procedures	
Sigh	
100% O ₂	
Suction	
Manual breath	
Expiratory hold	
Inspiratory hold	
PO.1	
NIF	
PV - Tool	
PEEPi	
O ₂ Therapy	



Globally experienced, locally accessible

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Headquartered in Shenzhen, China, and listed on the New York Stock Exchange, Mindray possesses a sound distribution and service network with subsidiaries in 18 countries in North and Latin America, Europe, Africa and Asia- Pacific. While improving the quality of care, we help in reducing its cost, making it more accessible to a larger part of humanity.

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SV350 Ventilator



Technical Specifications		
Physical Specification		
Dimensions	354 mm*315 mm*249 mm (Excluding the trolley)	
Weight	Approximately 10 kg (Excluding the trolley)	
Screen		
Display Size	12.1 Color active matrix TFT touch	
Display Resolution (H) x (V)	1280*800 pixels	
Brightness	Adjustable	
Ventilation Specifications		
Patient Type	Adults, children, infants (body weight of at least 3 kg)	
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) APRV (Airway Pressure Release Ventilation) PRVC (Pressure Regulated Volume Control) PRVC-SIMV ((Pressure Regulated Volume Control- Synchronized Intermittent Mandatory Ventilation) NIV (Non-invasive ventilation) Apnea Ventilation	
Controlled Parameters		
O ₂ %	21 - 100% (increments of 1 %)	
TV(Tidal Volume)	Adult: 100 - 2000 mL (increments of 10 mL) Pediatric: 20 - 300 mL (increments of 1 mL)	
f (Ventilation frequency)	1 - 100 bpm (increments of 1 bpm)	
fSIMV (Ventilation frequency in SIMV mode)	1 - 60 bpm (increments of 1 bpm)	
I:E range	4:1 - 1:10 (increments of 0.5)	
T _{insp} (Inspiratory time)	0.20 - 10 s (increments of 0.05 s)	
T _{slope} (Time of Pressure Rising)	0 - 2.00 s (increments of 0.05 s)	
Thigh	0.2 - 30 s (increments of 0.1 s)	
T _{low}	0.2 - 30 s (increments of 0.1 s)	
T _{pause}	5 % - 60 % (increments of 5 %), Off	
ΔP _{insp}	5 - 80 cmH ₂ O (increments of 1 cmH ₂ O)	
ΔP _{supp}	0 - 80 cmH ₂ O (increments of 1 cmH ₂ O)	
Phigh	0 - 80 cmH ₂ O (increments of 1 cmH ₂ O)	
P _{low}	0 - 45 cmH ₂ O (increments of 1 cmH ₂ O)	
PEEP	1 - 45 cmH ₂ O (increments of 1 cmH ₂ O), Off	
Flow trigger	0.5 -15 L/min (increments of 0.1 L/min), Off	
Pressure trigger	-10 to - 0.5 cmH ₂ O (increments of 0.5 cmH ₂ O), Off	
Exp % (Expiration termination level)	10 - 85% (increments of 5%), Auto	
Apnea Ventilation		
T _{vpnea}	Adult: 100 - 2000 mL (increments of 10 mL)	Pediatric: 20 - 300 mL (increments of 1 mL)
ΔP _{apnea}	5 - 80 cmH ₂ O (increments of 1 cmH ₂ O)	
f _{apnea}	1 - 80 bpm (increments of 1 bpm)	
Apnea_T _{insp}	0.20 - 10 s (increments of 0.05 s)	

*1 BTPS =Body Temperature and Pressure Saturated

*2 The standard work condition is:Ventilation mode:P-A/C ; ΔP_{insp}:10 cmH₂O ; f:10 bpm ; T_{insp}:2 s ; T_{slope}:0.2 s ; O₂:%21 Vol.%; PEEP:5 cmH₂O ; R:20 cmH₂O/L/s ; C:20 ml/cmH₂O ; Gas supply nominal work pressure:400±100 kPa.

Sigh		
Sigh Switch	ON, Off	
Interval	20 s - 180 min (increments of 1 s from 20 to 59 s, increments of 1 min from 1 to 180 min)	
Cycles Sigh	1 - 20 (increments of 1)	
Δint.PEEP	1 - 45 cmH ₂ O (increments of 1 cmH ₂ O), Off	
Automatic Tube Resistance Compliance		
Tube Type	ET Tube, Trach Tube, Disable ATRC	
Tube I.D.	Adult: 5.0 - 12.0 mm (increments of 0.5 mm) Pediatric: 2.5 - 8.0 mm (increments of 0.5 mm)	
Compensate	0 -100 % (increments of 1 %)	
Expiration Compliance Switch	ON, Off	
Monitored parameters		
Airway pressure range	Ppeak, Pplat, Pmean, PEEP (Range 0 - 120 cmH ₂ O)	
Tidal volume range	TVi, TVe, TVe spn (Range 0 - 4000 mL)	
Frequency range	ftotal, fmand, fspn (Range 0 - 200 bpm)	
Minute volume range	MV, MVspn, MVleak (Range 0 - 100 L/min)	
Resistance	Rinsp, Rexp (0 - 600 cmH ₂ O/L/s)	
Compliance	Cstat, Cdyn (0 - 300 mL/cmH ₂ O)	
Inspired Oxygen(FiO ₂)	15 - 100 %	
RSBI	0 - 999 1/(L•min)	
WOB	0 - 100 J/min	
P0.1	-20 - 0 cmH ₂ O	
NIF	-45 - 0 cmH ₂ O	
PEEPi	0 - 80 cmH ₂ O	
Rcexp	0 - 10 s	
TVe/IBW	0 - 50 ml/kg	
I:E	100:1 -1:150	
Tinsp	0.00 - 60.00s	
Waveforms	Airway pressure - time, Flow - time, Volume - time	
Loops	Paw - Volume, Flow - Volume, Paw - Flow	
Ventilator Accuracy		
Control Accuracy		
O ₂ %	± (3 vol.% +1 % of setting)	
TV	± (10 mL + 10 % of setting) (BTPS)	
Tinsp	± 0.1 s or ± 10 % of setting, whichever is greater	
I: E	2: 1 to 1: 4: ± 10 % of setting, other range: ± 15% of setting	
f	± 1 bpm	
fSIMV	± 1 bpm	
Tslope	± (0.2 s + 20 % of setting)	
PEEP	± (2.0 cmH ₂ O + 5 % of setting)	
ΔPinsp	± (2.0 cmH ₂ O + 5 % of setting)	
ΔPsupp	± (2.0 cmH ₂ O + 5 % of setting)	
Phigh	± (2.0 cmH ₂ O + 5 % of setting)	
Plow	± (2.0 cmH ₂ O + 5 % of setting)	
Thigh	± 0.2 s or ± 10 % of setting, whichever is greater	
Tlow	± 0.2 s or ± 10 % of setting, whichever is greater	
Pressure Trigger	± (1.0 cmH ₂ O + 10 % of setting)	
Flow Trigger	± (1.0 L/min + 10 % of setting)	
Δint.PEEP	± (2.0 cmH ₂ O + 5% of setting)	
Exp %	± 10 %	
fapnea	± 1 bpm	
ΔPapnea	± (2.0 cmH ₂ O + 5 % of setting)	
TVapnea	± (10 mL + 10 % of setting) (BTPS)	
Apnea.Tinsp	± 0.1 s or ± 10% of setting, whichever is greater	

Monitoring Accuracy			
Airway pressure (Ppeak, Pplat, Pmean, PEEP)	± (2 cmH ₂ O + 4 % of the actual reading)		
Tidal Volume (TVi, TVe, TVe/IBW, TVe spn)	0 ml - 100 ml: ± (10 ml + 3 % of the actual reading) (BTPS); 100 ml - 4000 ml: ± (3 ml + 10 % of the actual reading) (BTPS)		
Minute Volume (MV, MVspn, MVleak)	± (0.2 L/min + 10 % of the actual reading) (BTPS)		
Frequency (ftotal, fmand, fspn)	± 5% of reading or ± 1bpm, whichever is greater		
Inspired Oxygen (FO ₂)	± (2.5 vol.% + 2.5 % of the actual reading)		
Resistance	0 to 20: ± 10 cmH ₂ O/L/s Other range: 50 % of actual reading		
Compliance	± (2 ml/cmH ₂ O + 20 % of the actual reading)		
RSBI	± (3 1/(L•min))+15% of the actual reading)		
WOB	± (1 J/min+15% of the actual reading)		
NIF	± (2 cmH ₂ O + 4 % of the actual reading)		
P0.1	± (2 cmH ₂ O + 4 % of the actual reading)		
PEEPi	No declaration		
RCexp	± (0.2 s + 20 % of the actual reading)		
Alarm settings			
Tidal Volume	High	Adult: 110 - 4000 mL, Off	Pediatric: 25 - 600 mL, Off
	Low	Adult: 50 - 4000 ml, Off	Pediatric: 10 - 600 mL, Off
Minute Volume	High	Adult: 0.2 - 100.0 L/min	Pediatric: 0.2 - 60.0 L/min
	Low	Adult: 0.1 - 50.0 L/min	Pediatric: 0.1 - 30.0 L/min
Air pressure	High	10 - 85 cmH ₂ O	
Frequency	High	1 - 150 bpm, Off	
Inspired oxygen (FiO ₂)	High	Auto, FiO ₂ exceeds the alarm limit for at least 30 s, internal alarm limit: min (set value+max (7 % or set value*10 %), 100 %)	
	Low	Auto, FiO ₂ lower than the alarm limit for at least 30 s, internal alarm limit: max (set value-max (7 % or set value*10 %),18 %), Absolute FiO ₂ , low limit: 18 %	
Apnea alarm time	5 - 60 s		
SideStream CO₂ Module (optional)			
Displayed numerics	EtCO ₂		
Measurement Range	0 - 99 mmHg		
Measurement accuracy	0 to 40 mmHg ± 2 mmHg 41 to 76 mmHg ± 5% of reading 77 to 99 mmHg ± 10% of reading		
Waveforms	EtCO ₂ - time		
Resolution	1 mmHg		
Sampling rate	Adult: 70 ml/min, 100 ml/min, 120 ml/min, 150 ml/min Pediatric: 70 ml/min, 100 ml/min		
Sampling rate Accuracy	± 15% of the set value or ± 15 mL/min, whichever is greater		
System response time	Using Adult water trap, Adult sampling line: < 7.5 s @ 150 ml/min < 8.0 s @ 120 ml/min < 8.5 s @ 100 ml/min < 9.5 s @ 70 ml/min Using Pediatric water trap, Pediatric sampling line: < 7.5 s @ 100 ml/min < 8.0 s @ 70 ml/min		
Rise time	Adult water trap: < 400 ms @70 ml/min < 330 ms @100 ml/min < 300 ms @120 ml/min < 240 ms @150 ml/min Pediatric water trap: < 400 ms @70 ml/min < 330 ms @100 ml/min		
Water trap cleaning time	Adult water trap: ≥24 h @150 ml/min ≥48 h @70 ml/min Pediatric water trap: ≥24 h @100 ml/min ≥48 h @70 ml/min		

Sidestream

CO₂ alarm limits			
EtCO ₂	High	2 - 99 mmHg	
	Low	0 - 97 mmHg	
MainStream CO₂ Module(optional)			
Displayed numerics	EtCO ₂		
EtCO ₂ Measurement range	0 -150 mmHg		
EtCO ₂ Measurement Accuracy	0 to 40 mmHg ± 2 mmHg of reading 41 to 70 mmHg ± 5% of reading 71 to 100 mmHg ± 8% of reading 101 to 150 mmHg ± 10% of reading		
Resolution	1 mmHg		
Waveforms	EtCO ₂ - time, Volume - EtCO ₂		
Other Parameters			
SlopeCO ₂ (slope of the alveolar plateau)	Range: 0 - 9.99 %/L	Resolution: 0.01 %/L	
Vtalv (Alveolar tidal ventilation)	Range: 0 - 9999 ml	Resolution: 1 ml	
V _{alv} (Alveolar minute ventilation)	Range: 0 - 20 L/min	Resolution: 0.01 L/min for < 1 L/min, 0.1 L/min for ≥ 1 L/min	
VCO ₂ (CO ₂ elimination)	Range: 0 - 9999 mL/min	Resolution: 1 ml/min	
VDaw (Airway death space)	Range: 0 - 999 mL	Resolution: 1 ml	
VDaw/TVe (Physiological dead space fraction at the airway opening)	Range: 0 - 100 %	Resolution: 1 %	
VeCO ₂ (exhaled CO ₂ volume)	Range: 0 - 999 mL	Resolution: 1 ml	
ViCO ₂ (inspired CO ₂ volume)	Range: 0 - 999 mL	Resolution: 1 ml	
System response time	< 2.0 s		
CO₂ alarm limits			
EtCO ₂	High	2 - 150 mmHg	
	Low	0 - 148 mmHg	
SpO₂ module(optional)			
Measurement Range and Resolution			
SpO ₂	Range: 0 - 100 %		Resolution: 1 %
PR	Range: 20 - 254 1/min		Resolution: 1 1/min
PI	Range: 0.05 - 20 %		
Measurement Accuracy			
SpO ₂	70 to 100 %: ±2 % 0 % to 69 %: Not specified.		
PR	± 3 1/min		
SpO₂ alarm limits			
SpO ₂	High	2 -100 %	
	Low	0 - 98 %	
	Desat	0 - 98 %	
PR	High	17 - 300 1/min	
	Low	15 - 298 1/min	
Trend			
Type	Tabular, Graphic		
Length	72 hours		
Content	Monitor Parameters, Setting Parameters (Setting Ventilation mode and Parameters)		
O₂ Therapy			
Controlled Parameters			
O ₂ %	21 - 100 % (increments of 1 %)		
Flow	2 - 50 L/min		
Controlled Accuracy			
O ₂ %	± (3 vol.% +1 % of setting)		
Flow	± (2 L/min +10 % of setting) (BTPS)		