




ViSOR
Healthcare Solutions



Aspiration 6 Anesthesia Machine

Aspiration 6

Anesthesia Workstation

Technical Specification

Various ventilation modes for comprehensive ventilation designed to meet different medical needs depending on the patient's condition and the goals of treatment so as to provide efficient and safe ventilation.

Available Ventilation Modes:

Volume Control Ventilation (VCV)

Pressure Control Ventilation (PCV)

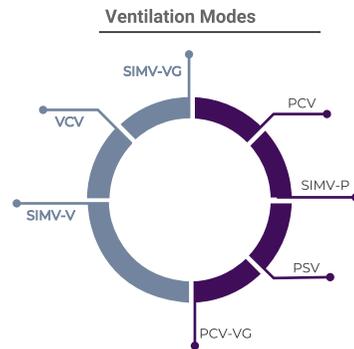
Pressure Control Ventilation with Volume Guarantee (PCV-VG)

Synchronized Intermittent Mandatory Ventilation (SIMV-V)

Synchronized Intermittent Mandatory Ventilation (SIMV-P)

Synchronized Intermittent Mandatory Ventilation (SIMV-VG)

Pressure Support Ventilation (PSV)



Configurations

Dimensions	Height (With casters)	1344mm
	Width	670mm
	Depth	700mm
Screen	12 inch TFT LCD touch screen	
Gas supply	O2, N2O, AIR	
By-pass	Standard	
ACGO	Standard	
Flowmeter	Mechanical, 6 tubes + Auxilliary	
Tidal Volume	15 - 1500ml	
Ventilator Software	VCV, PCV, PSV, SIMV-V, SIMV-P, SIMV-VG, PCV-VG, Manual / Spont	
Spirometry loop	P-V,P-F,F-V	
Spare Cylinder yoke	O2 (optional), N2O (Optional), Air (Optional)	
Li-ion Battery	1 Battery, 6600mAh	
FiO2	18% - 100%	
Waveforms	P - T, F - T, V - T	
Auxiliary power outlets	3	
Wheels	4 wheels with independent brakes	
Drawers	2	
Reading lamp	LED lighting Included	
Module Slots	2	
Built-in Heater	Standard	
O2 cell	Standard	
Vaporizer	2 Selectatec mount, 3rd mount optional	
Compatibility	Isoflurane, Sevoflurane, Enflurane, Halothane	
Optional	AGSS, 3rd Drawer, AG, EtCO2, PSI, SpO2	



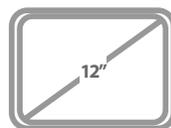
Integrated design of the breathing circuit with simplified connections ensures no exposed cables and enhances functionality, safety and efficiency while minimizing complexity to provide precise ventilation for adult and paediatric patients

Advanced Online By-Pass Technology in this machine allows for the safe and efficient replacement of soda lime in the circle absorber canister without causing leakage issues. This innovative feature enables seamless switching of the absorbent material while maintaining a continuous flow of gases through the system

Patient Type



Touch Screen Display



Aspiration 6

Technical Specifications

Anesthesia Machine

Technical Specification

Physical Specification

Dimensions and Weight

Height	1344mm
Width	670mm
Depth	700mm
Weight	140Kg(Standard)

Top Shelf

Weight limit	30Kg
Width	564mm
Depth	356mm

Work Surface

Weight limit	20Kg
Height	816mm
Width	520mm
Depth	284mm

Drawer

Height	387mm
Width	369mm
Depth	152mm

Casters

Brake	Four trolleys have brake, with the function of braking when trodden.
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Screen

Display type	12 inch TFT LCD Touch screen
Display parameters	All setting and alarm parameters (including Breath rate, I/E ratio, Tidal volume, Minute volume, PEEP, MEAN, PEAK, PLAT, and O ₂ concentration, EtCO ₂ , N ₂ O, Aesthesia gas concentration, PSI)
Graphic waveforms	Pressure, Flow, Volume, CO ₂ , NO ₂ , PSI, SPO ₂ , Anesthetic gas
Timer	Display on screen timer
Spirometry loops	Pressure vs Volume, Flow vs Volume, Flow vs Pressure
Screen Control	Touch screen/Mouse control
System Self-test	Serial com test, Drive gas pressure test, Module box self test, Monitoring board self test

Ventilator Specifications

Modes of Ventilation

Manual/Spontaneous Ventilation/Bypass
VCV, PCV, SIMV-VC, SIMV-PC, PSV
PSV backup ventilation VCV mode
PSV backup ventilation PCV mode

Ventilation Parameters Range

Patient type	Adult, Pediatric, Infant
Tidal volume	15-1500mL(increments of 1 mL)
Pinsp	5-70cmH ₂ O (increments of 1 cmH ₂ O)
Plimit	10-100cmH ₂ O (increments of 1 cmH ₂ O)
△P _{supp}	3-60cmH ₂ O(increments of 1 cmH ₂ O)
Respiration Rate	4-100bpm(increments of 1 bpm)
I:E	8:1-1:10 (increments of 0.5)
T _{pause}	OFF, 5% - 60% (increments of 1%)
T _{insp}	0.2 - 10.0 s (increments of 0.1 s)
Trigger window	5% - 90% (increments of 1%)
Flow trigger	0.2 ~ 15 L/min (increments of 0.1L/min)
Pressure trigger	-20~ -1 cmH ₂ O (increments of 1 cmH ₂ O)
Exp%	5% - 80% (increments of 1%)
T _{slope}	0.0 - 2.0 s (increments of 0.1 s)

Positive End Expiratory Pressure (PEEP)

Type	Integrated, electronic controlled
Range	OFF, 3-30 cmH ₂ O (increments of 1 cm H ₂ O)

Ventilator Performance

Driving pressure	280 kPa to 600 kPa
Flow valve range	V' _{max} . 120 L/min
Peak gas flow	120 L/min + Fresh Gas Flow

Monitoring Parameters

Minute volume	0-100L/min
Tidal volume	0-3000mL
Inspired oxygen (FiO ₂)	18% to100%
Pressure (Peak,Mean,Plateau)	-20-120cmH ₂ O
Rate	0-120bpm
PEEP	0-70cmH ₂ O
Resistance (R)	0-600cmH ₂ O/(L/s)
Compliance (C)	0-300ml/cmH ₂ O
I:E	10:1-1:10

Control Accuracy

Tidal volume(Vt)	20-59:±10mL 60-209:±15mL 210-1500:±7%of set value
Pinsp	±2.5 cmH ₂ O or ±7 of set value
P _{supp}	±2.5 cmH ₂ O or ±7 of set value
PEEP	±2cmH ₂ O or ±8% of set value
Rate	±1 bpm or ±10% of set value
I:E	±(10-25)% of set value
T _{insp}	±0.2s
Trigger window	±10%

Monitoring Accuracy

Tidal volume(Vt)	0mL~59mL: ± 10mL
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Pressure (Peak,Mean,Plateau)	60mL~209mL:± 15mL 210mL~3000mL: ± 7% of the monitoring value. ± 2.0cmH2O or ± 4% of the monitoring value, whichever is greater
PEEP	± 2.0cmH2O or ± 4% of the monitoring value, whichever is greater.
Rate	± 1bpm, or ± 5% of the monitoring value, whichever is greater.
Minute volume	± 0.1L/min or ± 8% of the monitoring value, whichever is greater
Resistance (R)	± (10ml/cmH2O+20% of reading value)
Compliance (C)	± (10mL/cmH2O+20% of the actual reading)
Cstat	± (10mL/cmH2O+20% of the actual reading)
I:E	within the range of 10.0:1 to 2.5:1, the error is ± 25% of I; Within the range of 2.0:1 to 1.5:1, the error is ± 10% of I; Within the range of 1:1.0 to 1:4.0, the error is ± 10% of I; In the range of 1:4.5~1:10.0, the error is ± 25% of E

Alarm setting

Audio adjustable	1-7 level adjustable
FiO2 high	20%-99%
FiO2 low	18%-98%
Paw high	2-100 cmH2O
Paw low	OFF,(1-98) cmH2O
Vte high	5-1600 ml
Vte low	OFF,(1-1595) ml
MV high	0.2-99 L/min
MV low	OFF,(0.1-98) L/min
Rate high	4-100 /min
Rate low	2-98 /min
Apnea alarm	Adjustment range is 15s to 60s, the error is ± 2s.

Data Storage

Patient types	Adult, Child and Infant for each Configuration
Log Storage	1000 sets
History trend	72 consecutive hours
Graphic Trends Resolution	5min,10min,20min,30min,60min
Tabular Trends Resolution	5min,10min,15min,30min,1hour,2hour

Pneumatic Specifications

Pipeline Supply

Gas type	O2, N2O and Air
Pipeline input range	280 to 600 kPa (40 to 87 psi)
Pipeline connections	DISS/NIST

Pipeline Supply Pressure Gauge

Display type	Mechanical
Ranges	0~1.4MPa;
Resolution	0.1MPa;
Accuracy	±0.1MPa or reading ±4%, select the max value

O2 Controls

O2 flush flow rate range	25 – 75 L/min
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Auxiliary O2 Flowmeter

Flow Range	0~15L/min
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Accuracy	± 10%of the indicated value (between 10%and 100%full range)
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Negative pressure suction device (optional)

High negative pressure/high flow continuous negative pressure suction mode

Maximum vacuum	When the external pressure pressure is 72kPa and the free flow rate is 40L/min, the maximum negative pressure
Maximum flow	When the external pressure pressure is 72kPa and the free flow rate is 40L/min, the maximum flow generated is 39L/min ~ 40L/min.

Flow meter range

O2 ,Air,N2O flow range	O2,Air:0~15L/min;N2O:0-12L/min
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Accuracy	2.5% of full scale
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O2 sensor(Chemical)

Type	Chemical and Replaceable(Requires calibration after replacement,)
Range	18%to 100%
Accuracy	± (2.5%volume percentage+2.5%of gas concentration)

Breathing System Specification

CO2 Absorber Assembly

Absorber capacity	1500mL
Absorber Canister Contents	1 Pre-Pak canister or Loose Fill absorbent

Water Collection Cup

Capacity	About 23ml
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Inspiratory Airway Pressure Gauge

Range	-20 ~ 100 cmH2O
Accuracy	± (2% of the full scale reading + 4% of the actual

Flow Sensor

Type	Variable orifice flow sensor
Location	Inspiratory and expiratory port

Breathing system connectors

Exhalation	Standard 22mm OD/15mm ID conical connectors
Inhalation	Standard 22mm OD/15mm ID conical connectors
Manual bag port	Standard 22mm OD/15mm ID conical connectors
Pipeline type	Optional silicone reusable pipeline
Connections to a Gas Scavenger	30 mm OD ISO

Bag-to-Ventilator Switch

Type	Bi-stable
Control	Switch between manual and mechanical ventilation

Adjustable Pressure Limiting (APL) Valve

Type	Manually control with quick relief function
Range	0cmH2O to 75cmH2O

Breathing System Temperature Controller

The system has heating function to heat the gas delivered to the patient through the breathing

Anesthetic Gas Scavenging System (AGSS) Optional

Size (H x W x D)	445×142×95 mm
Type of disposal system	Low-flow
Extract flow	35L/min~50L/min

Materials

All materials in contact with exhaled patient gases are autoclavable up to a maximum temperature of 134°C, except O2 sensor, and mechanical pressure gauge.
 All materials in contact with patient gas are latex free.

Breathing circuit parameters

System Compliance ≤4ml/cmH2O
 Internal Compliance
 Impedance in Manual Mode ≤ 6 cmH2O
 Impedance in Automatic Ventilation Mode ≤ 6 cmH2O
 Leakage ≤ 150 mL @ 3 kPa

Vaporizers

Anesthetic agent delivery

Vaporizer
 Support agents Halothane, Isoflurane, Sevoflurane, Enflurane
 Position 2 positions (3 positions, optional)
 Mounting mode Selectatec®, with interlocking function Plug-in®, with interlocking function

Monitor Modules

Anesthesia Gas (AG) Module (optional)

Side-Stream CO2 Module (optional)

Mainstream CO2 Module (optional)

SPO2 module (optional)

Electrical Specifications

Main Electrical Power

Power input 220-240V, Frequency 50/60Hz, 6A

Battery Power

Type Built-in Li-ion cel 14.4 VDC 6600mAh(Single)
 No. of Cell 1 cells(Optional 2 cells)
 Serving Time 1 cells 120 minutes(new and fully charged)
 Charging Time Less than 8 hours

Auxiliary Electrical Outlets

Auxiliary Output Power 220-240V, Frequency 50/60 Hz, 1.5A
 Auxiliary Output Power Fuse T4AH250V
 Number of Outlets 3

Environmental Specifications

Operating

Temperature 10°C~40°C
 Relative Humidity 15%-95%, Non-condensing
 Barometric (Kpa) 70kPa-106kPa

Storage

Temperature -20°C~55°C
 Relative Humidity 10%-95%, Non-condensing
 Barometric (Kpa) 50kPa-106kPa

Resistance to Ingress of Fluids

Complies with the requirements of clause 11.6.3 in IEC 60601-1 and also the requirements in IEC 60529 for protection against vertically falling water drops equipment (IPX0)

Interface

Communication Port

Auxiliary Output Interface Provide power supply to external devices

USB (1) port
 Network Interface
 Communicate

USB 2.0, Connect to external storage device, upgrade software
 One RJ45 network interface
 One HDMI interface

