Visor
Healthcare Solutions

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Aspiration 8

Anesthesia Machine

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ISO13485

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)

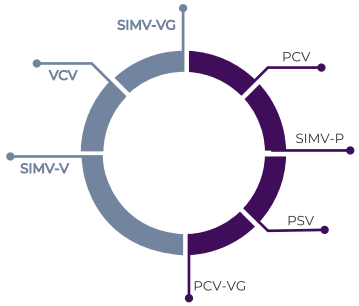
Synchronized Intermittent Mandatory Ventilation (SIMV-V)

Synchronized Intermittent Mandatory Ventilation (SIMV-P)

Synchronized Intermittent Mandatory Ventilation (SIMV-VG)

Pressure Support Ventilation (PSV

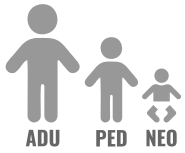
Ventilation Modes



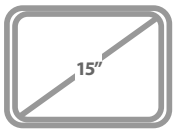
Integrated design of the breathing circuit with simplified connections ensures no exposed cables and enhances functionality, safety and efficiency while minimizing complexity to provide precise ventilation for adult and paediatric patients

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



Electronic Flowmeter

Aspiration 8

Anesthesia Workstation

Technical Specification

Configurations

Dimensions	Height (With casters)	1358mm
	Width	880mm
	Depth	784mm
Screen	15 inch TFT LCD touch screen	
Gas supply	O_2, N_2O, AIR	
By-pass	Standard	
ACGO	Standard	
Flowmeter	Electronic Flowmeter (Mechanical control, Electronic display)	
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	Four wheels(125mm) with 2 separate 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	

The company reserve the right to make any changes without prior notice due to continuous R&D.

Aspiration 8

Technical Specifications

Anesthesia Machine

Technical Specification

Physical Specification

Dimensions and Weight	
Height	1358mm
Width	880mm
Depth	784mm
Weight	145Kg(Standard)
Top Shelf	
Weight limit	30Kg
Width	564mm
Depth	356mm
Work Surface	
Weight limit	20Kg
Height	816mm
Width	520mm
Depth	284mm
Drawer (3 drawers)	
Height	138mm
Width	387mm
Depth	368mm
Bag Arm	
Height	1042mm
Length	312mm
Casters	
Brake	Four trolleys have brake, with the function of braking when trodden.
Working Light	
Settings	LED stripe light/OFF, Low, High(3 gears)
Rail mount	
Description	Used to install the standard accessory arm of the monitor and other equipment. There are mounting rails on the left and right sides of the equipment.
Screen	
Display type	15 inch TFT LCD Touch screen
Resolution	1024*768
Display parameters	All setting and alarm parameters (including Breath rate, I/E ratio, Tidal volume, Minute volume, PEEP, MEAN, PEAK, PLAT, and O2 concentration, EtCO2, N2O, Aesthesia gas concentration, PSI)
Resolution	1024*768
Graphic waveforms	Pressure, Flow, Volume, CO2 ,NO2,PSI,SPO2，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,Leak-self test

Ventilator Specifications

Modes of Ventilation

Manual(Spontaneous to Bag ventilation with single step)/Spontaneous Ventilation/Bypass
VCV、PCV、PCV-VG、SIMV-VC、SIMV-PC、SIMV-VG、PSV
PSV backup ventilation VCV mode

Compensation

Circuit gas leakage compensation and automatic compliance compensation

Ventilation Parameters Range

Patient type	Adult, Pediatric, Neonate
Tidal volume	15-1500mL(increments of 1 mL)
Pinsp	5-70cmH2O (increments of 1 cmH2O)
Plimit	10-100cmH2O (increments of 1 cmH2O)
△*Psupp*	3-60cmH2O(increments of 1 cmH2O)
Respiration Rate	4-100bpm(increments of 1 bpm)
I:E	8:1-1:10 (increments of 0.5)
Tpause	OFF, 5% - 60% (increments of 1%)
Tinsp	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 cmH2O (increments of 1 cmH2O)
Exp%	5% - 80% (increments of 1%)
Tslope	0.0 - 2.0 s (increments of 0.1 s)
Positive End Expiratory Pressure (PEEP)	
Type	Integrated, electronic controlled
Range	OFF, 3~30 cmH2O (increments of 1 cm H2O)
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 (FiO2)	18% to100%
Pressure (Peak,Mean,Plateau)	-20-120cmH2O
Rate	0-120bpm
PEEP	0-70cmH2O
Resistance (R)	0-600cmH2O/(L/s)

Compliance (C)	0-300ml/cmH2O
I:E	10:1-1:10
Control Accuracy	
Tidal volume(Vt)	15-59:±10mL 60-209:±15mL 210-1500:±7%of set value
Pinsp	±2.5 cmH2O or ±7 of set value
Psupp	±2.5 cmH2O or ±7 of set value
PEEP	±2cmH2O or ±8% of set value
Rate	±1 bpm or ±10% of set value
I:E	±(10-25)% of set value
Tinsp	±0.2s
Trigger window	±10%
Monitoring Accuracy	
Tidal volume(Vt)	0mL~59mL: ± 10mL 60mL~209mL:± 15mL 210mL~3000mL： ± 7% of the monitoring value.
Pressure (Peak,Mean,Plateau)	± 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 In the range of 1:4.5~1:10.0, the error is ± 25% of E
Alarm setting(Audio Visual alarm)	
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.
Lung Recruitment Tool	
Lung Recruitment Maneuver :	Increasing PEEP progressively (with a maximum of 8 stages)
Adjustable Ventilation Parameters for Lung Recruitment:	Pinsp,I:E,PEEP,Rate,P_step,B_step
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
Optional connection	Yoke each for oxygen and nitrous oxide cylinders
Pipeline Supply Pressure Gauge(Optional Yoke gauges)	
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
Auxiliary O2 Flowmeter	
Flow Range	0~15L/min
Accuracy	± 10%of the indicated value (between 10%and 100%full range)
Negative pressure suction device (optional)	
Mode	External negative pressure suction
Flow meter range(Mechanical control digital display)	
O2 flow range	0~15L/min
Air flow range	0~15L/min
N2O flow range	0~12L/min
Accuracy	less than ± 10% of the indicated value (under 20 ° C, 101.3 kPa, between 10%and 100%of the full scale)
Total Flow range	
Total flow range	0L/min ~ 15L/min
Total flow accuracy	± 10%of the indicated value (between 10%and 100%full range)
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
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

Digital Pramagnetic O2 sensor(Optional)

Type	Digital Pramagnetic O2 sensor
Measuring Range	0-100% O2
Signal Output	9-13mV
Response Time 90%	T90=6s
Accuracy Full Scale	±2.5%
Accuracy Over Operating Range	± 5%
Drift % Signal/Month	< 1%
Linearity	±0.2%
Recommended Flow Rate	0.1-10

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	Enurane,Isourane,Sevourane,Halothane
Position	2 positisons (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)

PSI 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 than8 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℃~40℃
Relative Humidity	15%-95%,Non-condensing
Barometric (Kpa)	70kPa-106kPa

Storage

Temperature	-20℃~55℃
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	USB 2.0, Connect to external storage device, upgrade software
Network Interface	One RJ45 network interface
Communicate	One HDMI interface