❖ Ergonomics design anesthesia machine

- More convenient operating and display systems for clinical requirements; Suitable for a wide range of anesthesia: adult and infant. Tidal volume 20～1500 mL(Optional 10-1600mL).
- Electronic PEEP, Imported proportional valve, High precision electronic flowmeter,all ensure the excellent performance, durable for long-term use.
- Highly integrated circuits, centrilized heating techinque avoids condensation in the circuit with bypass function, the canister can be replaced during ventilation without stoping anesthesia operation.
- Sufficient monitoring parameter: Ppeak, Pmean, Pmin, Pplat, PEEP Compliance, Resistance, O_2%, $EtCO_2$, $FiCO_2$.
- Clinician's health concerns: Independent AGSS systems avoids anesthesia gas commulation & removes health concerns for clinicians.
- Complete alarm function to make sure that operating is accurate & stable.

System Specifications

Description	Technical Parameters
Machine	
Size	1410× 950 × 650mm (H × W × D)
Weight	Approximately110kg
Maximum bearing weight of the top cover	30kg
Display	
Type	Color TFT LCD (touch screen)
Size	12.1 inches
Resolution	800 × 600 pixels
Brightness	Not adjustable
LED indication	
Alarm Indication	8 (yellow, red, and when the senior and mid-level alarms occur simultaneously, only red flashes on priority)
AC power indicator	1 (green)
Battery indicator	2 (green and orange)
Audio instruction	
Speaker	Alarm sounds, tone, volume adjustable, alarm tone meet IEC60601_1_8 standards.
Control	
Knobs	1 Support clockwise/counter-clockwise rotation and pressing operation
Button	4 Alarm pause, alarm reset, standby, back to the main screen
Interface	
Power supply	An AC power connector Three auxiliary output power interface
Equipotential	An equipotential ground
USB	1 standard USB interface
Moving means	
Roller	4 castors, diameter 125mm
Brake castors	Two lockable front casters
Toolbox	
Drawer	Drawer 1: 200 × 392 × 398mm (H × W × D) Drawer 2: 200 × 392 × 398mm(H × W × D)
Respiratory System	
Bellows capacity	1500mL
Absorber Canister Capacity	1500mL
Connection	Suction/ACGO ports: standard OD 22mm, ID 15mm, tapered connector; Exhalation ports: standard OD22mm, ID 15mm, tapered connector. Manually breathing bag port: diameter 22cm
System leaks	In any mode, the system is not greater than 100ml/min leakage
System compliance	The loss due to the system's internal compliance gas volume (manual mode) as follows:
Adult mode	≤ 4 mL / cmH_2O
pediatric mode	≤ 3 mL / cmH_2O
Resistance	Inspiratory < 0.6 kPa Expiratory < 0.6 kPa
Real-time clock	
Range	2000(00 : 00)~2100 (23 : 59)
Accuracy	±1 minute
Display Resolution	1minute / month (at 21 ± 3 ℃ under the conditions)
Use the power	Independent power (button battery) power supply.

Main technical parameters

Description	Parameter
Basic function	
Display:	12.1" TFT with touch screen
Ventilation Model:	VCV, SIMV-VCV, PCV, SIMV-PCV , SOPNT/PSV, Manual, Standby
Optional mode:	PRVC(PCV-VG), SIMV-PRVC
Tidal Volume:	20-1500ml(Optional 10-1600mL)
Fresh Gas Compensation Pre-use check, leakage testing and compliance compensation	
Electronic PEEP	
Waveform	
LOOP: P-V, V-F ,P-F	
Paw-T, Flow-T, V-T,	
Optional :CO2-T, Pleth, AG	
Trend	
24hours	
Gas supply Pressure Monitoring	
Gauge-Pipeline supply: O_2, N_2O,Air	
Optional :Gauge-Cylinder: O_2, N_2O (Configured with Yoke Option)	
Monitoring Parameter	
Tidal Volume, MV, Frequency, I:E,	
Airway Pressure,Compliance,Resistance	
(Optional:$EtCO_2$、 $FiCO_2$, PHASEIN gas module for anesthetic agent)	
Application	
Infant, Pediatric and Adult	
Vaporizer	2 positions
Gas supply	O_2, N_2O, Air
Alternate O_2 (safety flow)	Range : 0 to 15 L/min Indicator: Flow tube Indicator accuracy : ±10%
Fresh gas Flowmeter & Mixer(Electronic automatic control)	
Flow range :	
O_2:	0～15LPM,
N_2O:	0～12LPM,
Air:	0～15LPM;
Flow accuracy :	± 10% of settingor ±0.1L/min
O_2 concentration range :	21% to 100%O_2 concentration
Accuracy:	± 5%
Electronic Miting Conspeusation :	0.5s (10%-90% flow step)
Compensation :	Temperature and atmospheric pressure compensated to standard conditions of 20 C and 1013 kpa
Hypoxic guard :	Electronic
FiO_2%	O_2 sensor
Auxiliary O_2 supply	Optional: O_2 Flow meter (O_2: 0～15LPM) (Optional)
ACGO	Yes(Optional)
Battery	NI-MH battery build in.>90mins
Yoke system	Optional: O_2, N_2O
Cycle Absorber	Intergrated, bypass Design, heating system.

Setting Parameters

Description	Parameter
Tidal Volume	20～1500 mL(Optional 10-1600mL)
Frequency	1～100 bpm
Tinsp	0.1～10.0 s
I:E	4:1～1:10
Pause	0～60%
PEEP	OFF, 3～30 cmH_2O
Psupp	0～70 cmH_2O
Pressure Control	5～70 cmH_2O
Flow Trigger	0.5～20 L/min
Pressure Trigger	0～20 cmH_2O
Ramp	0～2s
Expiratory Trigger	5~80%

Monitoring Parameters

Description	Parameter
Tidal Volume Inspiration	0～2500 mL
Tidal Volume Expiration	0～2500 mL
MV	0～60 L/min
MVspont	0～60 L/min
Frequency	0～100 bpm
Ratespont	0～100 bpm
I : E	9 : 1～1 : 99
Ppeak	0～100 cmH_2O
Pmean	0～100 cmH_2O
PEEP	0～100 cmH_2O
Pplat	0～100 cmH_2O
Pmin	-20~100 cmH_2O
O_2%	15～100%
Compliance	0～300 mL/cmH_2O
Resistance	0～600 cmH_2O/(L/s)
$EtCO_2$ (Optional)	0～13.3 %
$FiCO_2$ (Optional)	0～13.3 %
Anesthetic agent	Masimo gas module for anesthetic agent
Flow Trigger	0.5～20 L/min
Pressure Trigger	0～20 cmH_2O
Ramp	0～2s
Expiratory Trigger	5~80%

Alarm Parameters

Description	Parameter
Tidal Volume	
Upper limit	30～2000 mL
Lower limit	OFF, 20～1500 mL
MV	
Upper limit	1～99 L
Lower limit	0～98 L
O_2% (Optional)	
Upper limit	22～100%, OFF
Lower limit	20～99%
Airway Pressure	
Upper limit	10～99 cmH2O
Lower limit	1～98 cmH2O
Frequency	
Upper limit	1～100 bpm
Lower limit	0～99 bpm
$EtCO_2$ (Optional)	
Upper limit	0.1～13.3 % ;
Lower limit	0～13.2 %;

Environmental Specifications

Description		Parameter
Work Environment		
	Temperature	10~40℃
	Humidity	5~95%,non-condensing
	Environmental pressures	50~106 kPa
Storage environment		
	Temperature	-20~55℃
	Humidity	10~95%,non-condensing
	Environmental pressures	50~106 kPa

Power Specifications

Description	Parameter
External AC power	
Input Voltage	100-240V
Input Frequency	50/60Hz
Input Power	<150 VA
Internal Battery	
Number of batteries	A battery pack
Battery Type	NiMH batteries
Rated battery voltage	12VDC
Battery capacity	4200mAh
Shutdown Delay	Less than 10min
Shortest supply time	90min
Charging time	4h

Vaporizer:

Description	Parameter
Flow range:	0.2-15L/min
Connector type:	Selectatec compatible, Plug in, Cagemount
Dosing methods:	Pour-fil, Easy-fil, Quik-fil (Sevoflurane)
Working environment	
Working temperature:	+15℃ ~ +35℃
Relative humidity:	≤93%
Atmospheric pressure range:	70kPa ~ 106kPa
Storage temperature:	-40℃ ~ +65℃
Anesthetic concentration	
0 ~ 5.0%:	Isoflurane, Enflurane, Halothane
0 ~ 8.0%:	Sevoflurane

Beijing Siriusmed Medical Device Co., Ltd.
A-501, Building 17, No.8 Liangshuihe 2nd Street, YiZhuang Economic-Technical Development Area, Beijing, China.
Tel: 0086-10-87576012 Fax: 0086-10-87576012 E-mail: sales@siriusmedica.com

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SIRIUSMED
Care for today , Health for tomorrow

Anaesthetic Workstation

X55

Anaesthetic workstation for operation room
12.1" Touch screen Color TFT

Top Shelf And Light

Loading weight 30Kg, Height: 1410mm, Width: 550mm, Depth: 350mm,
LED light illuminates all work surfaces.

Friendly Interface

12.1" TFT touch screen, with a rotary knob. Resolution 800 X 600.

Electronic GAS Mixer

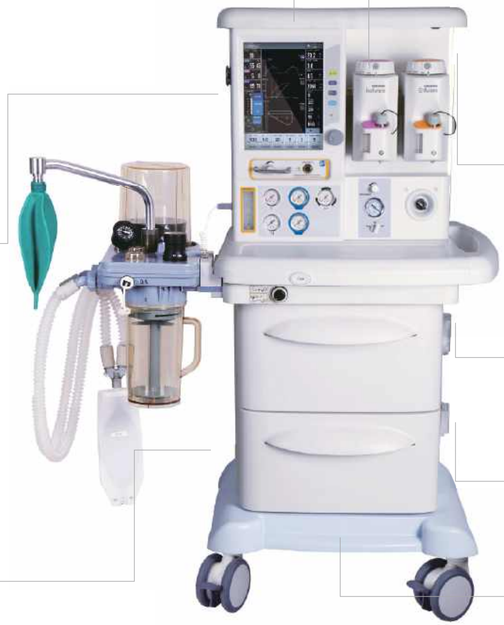
Electronic gas mixer for O_2 and Air or N_2O, adjustable O_2 concentration and fresh gas flow rate control, mechanical knob flow control for safety backup.

Monitoring Interface

Overall parameters of setting, measurement and graphic trends data for intuitive displays.

Anesthesia Gas Scavenging System

Independent active AGSS exhaust, avoids anesthesia air pollution in the OR & concerns over clinicians health.



Dual Vaporizer

Select bar support 2 vaporizers position for Isoflurane, Sevoflurane, Halothane VP10 vaporizer compensates for variances in pressure, temperature and flow and needs no annual recalibration.

Dual DIN Rail Sys

Adapt patient monitor support arm,
BIS SYS or syringe pump frame on both sides.

Drawer

Size: 200 x 392 x 398mm(H x W x D) x 2,
Optional max 3.

Suction

Patient suction system with a regulator
and reusable canister.

Central Braking System for Castors

Four casters with two brakes, diameter is 125mm.
Optional the central braking system for castors.

❖ Ergonomic Integrated Breathing Circuit

Technology innovation:

- A closed and semi-closed circuit; natural latex free to avoid allergic reaction. Fully 134℃ autoclavable to avoid cross infection, especially for respiratory disease operation.
- Embeded design, flow sensor with variable orifice, suitable for different applications from infant to adult. Tidal volume 20～1500 mL(Optional 10-1600mL).
- Efficient, integrated heating system, optimized airway and water trap design to ensure the air flow without effected by condensation. Also ensures the accuracy of operation for long term.
- Bypass design, fast and convenient replacement of absorber canister , priorty alarm function reminds the user always for safe and reliable operation.

Humanized design:

- Circuit heating system controls the temperature at 35℃ (±2℃) to avoid condensation effect on the flow sensor lifetime and accuracy; also make the patient feel more comfortable.
- Bypass design enable fast and convenient replacement of CO_2 canister without stopping operation. Special designed chamber assembly monitoring to avoid disoperation.

❖ CO_2 Absorber System

- 134ºC autoclavable CO_2 absorber integrated bypass system, totally latex free.
- Variable orifice flow sensor design.
- 35℃ (±2℃) integrated heating system.
- Bypass design with canister remove alarm.
- Easy installation, no special tools / training for cleaning, maintaining & disinfection is needed.

❖ Ventilation

- The large color LCD screen displays all ventilator's setting data, measurement information, loops and numeric / graphic trends. Standard Active Exhalation Valve, Electronic flowmeter, etc.
- Sufficient modes of Ventilation, Volume Control, Pressure Control, SIMV (Volume and Pressure), CPAP / PSV and manual. With Tidal volume 20ml which could apply adults and infant.
- Optional auxiliary oxygen flowmeter and with famous brand SPO_2, $EtCO_2$ provide more monitoring parameters for droctor's reference.

❖ Features

- Applicable for infant, child and adult, simplified patient type selection and parameter setting, Tidal volume 20~1500ml
- 12.1" high resolution TFT touch screen, user friendly design, multiple patient monitoring configuration meet all kinds of clinical requirements
- Configured with startup pre-use test, patient circuit leakage and compliance test
- Electrical control gas mixer, backup fresh gas delivery system for safety Configurable fresh gas flow and O_2 concentration
- Driving gas switching system for O_2 and Air
- Interlock two vaporizer mounting system
- Backup yoke gas supply with pressure gauge monitoring
- Auxiliary O_2 supply system with flowmeter
- Built in vacuum system （Optional) for multiple clinical purpose
- Modularized absorber cycle design, built in heating system, bypass deign with smart detection for a safety soda line replacement during operation
- Configured with VCV, PCV, SIMV-V, SIMV-P, SPONT/PSV, Backup modes: VCV & PCV, Manual
- Up to 24 hours patient monitoring trend and table for a professional clinical assistant
- Built-in $EtCO_2$ and Fi/Et anesthesia gas monitoring module for an organization operation environment
- Convenience maintenance, simplified calibration and upgrade procedure

VCV PSV PCV