

❖ Ergonomics design anesthesia machine

- More convenient operating and display systems for clinical operations; Suitable for a wide range of anesthesia: adult and infant. (Tidal volume 20-1500mL).
- Electronic PEEP, Imported proportional valve, High precision electronic flowmeter, all ensure the excellent performance, durable, long-term use.
- Highly integrated circuits, the overall heat auto circuit technology to avoid condensation circuit; bypass function, the canister can be replaced in the course of anesthesia, no harmful gas leakage.
- Sufficient monitoring parameter: P_{peak} , P_{mean} , P_{min} , P_{plat} , PEEP Compliance, Resistance, $O_2\%$, $EtCO_2$, $FiCO_2$.
- Clinician's health concerns: Independent AGSS exhaust vent and active sewage systems avoid anesthesia gas pollution.
- Complete alarm function to make sure the operation accuracy and stability.

System Specifications

Technical parameters	Specification
Machine	
Size	1380X950X650 (H x W x D)
Weight	Approximately 110kg
Maximum bearing weight of the top cover	30kg

Display	Specification
Type	Color TFT LCD (touch screen)
Size	19 inches
Resolution	1366 x 768 pixels
Brightness	Not adjustable

LED indication	Specification
Alarm Indication	8 (yellow, red, and when the senior and mid-level alarms occur simultaneously, only flashes red) 1 (green)
AC power indicator	1 (green)
Battery indicator	2 (green and orange)

Audio instruction	Specification
Speaker	Alarm sounds, tone, volume adjustable, alarm tone meet IEC60601_1_8 standards.

Control	Specification
Knobs	1 Support clockwise/counter-clockwise rotation and pressing operation

Interface	Specification
Power supply	An AC power connector Three auxiliary output power interface
Equipotential USB	An equipotential ground 1 standard USB interface

Moving means	Specification
Roller	4 castors, diameter 125mm

Brake	Specification
Brake plate	Located two front casters, depressing is the braking action.

Toolbox	Specification
Drawer	Drawer: 200 x 392 x 398 (H x W x D) Drawer two: 200 x 392 x 398 (H x W x D)

Respiratory System	Specification
Bellows capacity	1500mL
Absorber Canister Capacity	1500mL
Connection	Suction/ACGO ports: standard OD 22mm, ID 15mm, tapered connector; Exhalation ports: standard OD 22mm, ID 15mm, tapered connector. Manually breathing bladder port: diameter 22cm In any mode, the system is not greater than 140mL/min leakage

System leaks	Specification
System compliance	The loss due to the system's internal compliance gas volume (balloon mode) as follows: Adult mode Type ≤ 4 mL / cmH ₂ O, pediatric mode ≤ 3 mL / cmH ₂ O Inspiratory impedance: less

Respiratory system	Specification
Resistance	resistance than 0.6kPa; expiratory resistance: not more than 0.6 kPa

Real-time clock	Specification
Range	2015(00:00)~2165 (23:59)
Accuracy	± 1 minute
Display Resolution	1 minute / month (at 21 ± 3 C under the conditions)
Use the power	Independent power (button battery) power supply.

Main technical parameters

Basic function	Specification
Display	19" TFT with touch screen
Ventilation Model:	VCV, SIMV-VCV, PCV, Manual, Standby, SIMV-PCV, PSV, BACKUP-VCV, BACKUP-PCV
Optional mode:	PRVC(PCV-VG), SIMV-PRVC
Tidal Volume:	50~1500ml
Optional Min 20mL	
Fresh Gas Compensation	
Pre-use check, leakage testing and compliance compensation	
Electronic PEEP	
Touch screen, button	
Top light	

Waveform	Specification
	Paw-T, Flow-T, V-T LOOP: P-V, V-F, P-F Optional: CO ₂ -T, Pleth, AG

Trend	Specification
	24hours

Gas supply Pressure Monitoring	Specification
	Gauge-Pipeline supply: O ₂ , N ₂ O, Air Optional: Gauge-Cylinder: O ₂ , N ₂ O (Configured with Yoke Option)

Monitoring Parameter	Specification
	Tidal Volume, MV, Frequency, I:E, Airway Pressure, Compliance, Resistance (Optional: $EtCO_2$, $FiCO_2$, PHASEIN gas module for anesthetic agent)

Application	Specification
	Infant, Pediatric and Adult

Vaporizer	Specification
	two position

Gas supply	Specification
	O ₂ , N ₂ O, Air

Alternate O ₂ (safety flow)	Specification
	Range: 0 to 15 L/min Indicator: Flow tube Indicator accuracy: $\pm 10\%$ of setting or ± 0.2 L/min

Fresh gas Flowmeter & Mixer (Electronic automatic control)	Specification
Flow range:	O ₂ : 0~15L/min N ₂ O: 0~12L/min Air: 0~15L/min
Flow accuracy:	$\pm 10\%$ of setting or ± 0.1 L/min
O ₂ concentration range:	21% to 100% O ₂ concentration

Accuracy:	$\pm 5\%$ of setting valve
Electronic mixer response time:	less than 0.5s (10%-90% flow step)
Compensation:	Temperature and atmospheric pressure compensated to standard conditions of 20 C and 1013 kpa

Hypoxic guard:	O ₂ sensor
$FiO_2\%$	O ₂ Flow meter (O ₂ : 0~15LPM)
Alternate O ₂ control	Optional: O ₂ Flow meter (O ₂ : 0~15LPM) (Optional)
Auxiliary O ₂ supply	Yes (Optional)

ACGO	NI-MH battery build in, >90mins
Battery	O ₂ , Air
Driver Gas	Optional: O ₂ , N ₂ O
Yoke system	Intergrated, bypass Design, heating system.
Cycle Absorber	

Setting Parameter

Parameter	Description
Tidal Volume	50~1500 mL, Optional Min 20mL
Frequency	1~100 bpm
Tinsp	0.1~10.0 s
I:E	4:1~1:10
Pause	0~60%
PEEP	OFF, 3~30 cmH ₂ O
Psupp	0~70 cmH ₂ O
Pressure Control	5~70 cmH ₂ O
Flow Trigger	0.5~20 L/min
Pressure Trigger	0~20 cmH ₂ O
Tslope	0~2s
Expiratory Trigger	5~80%

Monitoring Parameter

Parameter	Description
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 ₂ O
Pmean	0~100 cmH ₂ O
PEEP	0~100 cmH ₂ O
Pplat	0~100 cmH ₂ O
Pmin	-20~100 cmH ₂ O
O ₂ %	15~100%
Compliance	0~300 mL/cmH ₂ O
Resistance	0~600 cmH ₂ O/(L/s)
$EtCO_2$ (Optional)	0~13.3 %
$FiCO_2$ (Optional)	0~13.3 %
Anesthetic agent	PHASEIN gas module for anesthetic agent

Alarm Parameter

Parameter	Description
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 cmH ₂ O Lower limit 1~98 cmH ₂ O

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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 %
$FiCO_2$ (Optional)	Upper limit 0.1~13.3 %
PRESSURE HIGH	Airway pressure > (PEEP+15) cmH ₂ O, continuously high pressure > (15+1) s 10~60 s, Increase: 5 s < 0.28 MPa Automatic battery backup < 10 min < 5 min ≤ 120 s < -10cmH ₂ O < 18 Vol. %

APENA	O ₂ SUPPLY DOWN MAINS FAILURE BATTERY LOW BATTERY DISCHARGED MUTE PRESSURE LOW FIO ₂ < 18%
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Environmental Specifications

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

Power Specifications

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

Vaporizer:

Technical Specification	Specification
Number of positions:	2
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 C ~ +35 C
Relative humidity:	$\leq 93\%$
Atmospheric pressure range:	70kPa ~ 106kPa
Storage temperature:	40 C ~ +65 C

Main technical parameters

Anesthetic concentration:	Specification
0 ~ 5.0%:	Isoflurane, Enflurane, Halothane
0 ~ 8.0%:	Sevoflurane



X66 Anesthetic Workstation

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Care for today, Health for tomorrow

- Exclusively 19" LCD with high resolution touch screen
- 3 station selectatec Vaporizer back-bar
- Special modular design for SPO₂, ETCO₂, Multi-gas, EEG
- Electronic gas mixer and virtual flowmeters
- Tidal volume minimum: VCV 10mL, PCV 5mL



X66 Anesthesia Workstation

Focus on every patient's needs, Let life be more reliable



- 19" TFT touch screen with Double screen display technology, independently developed software platform, highly user-friendly interface, independently developed software platform, highly user-friendly interface

- Intelligent fully electronic flow meter, sophisticated electronic gas mixing system

- Functional modular design structure:

Three compartmental expansion slot, Instant swap/replacement of application modules, EtCO₂, SpO₂, Multi-Gas Monitoring Module, BIS with customizable anesthesia information system.



- 7" electronic display of pressure gauges for real-time monitoring of system gas supply.



- BYPASS intelligent monitoring function (patented technology).



- Three vaporizer parking place, selectec compatible with interlocking and bypass valve, ability to equip 3 various anesthesia agents (patented technology).



- Auxiliary oxygen flow meter.



- Built in Positive pressure suction device, (optional) for negative pressure suction, Pre-regulated suction pressure prior to usage.



- Emergency O₂ Flowmeter, Provides oxygen supply system, backup support.

- Driving gas switch fuction (oxygen - air), Provides for economical hospital soutsions, saving cost.



- Gas source expansion ports, support for Central gas supply & Yoke sytem (optional).

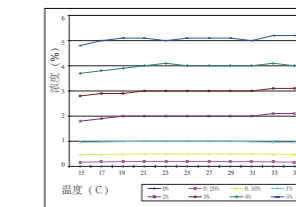
- Compact structure, product overall height reduction, four central brake system.

- Imported large antistatic castors, providing high mobilty and flexibility.

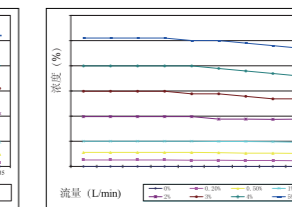
Vaporization

- High precision anesthetic vaporizer, service free, dual position with Selectatec bar. Dosage: 300ml, available for Halothane, Enflurane, Isoflurane, sevoflurane vaporizer with interlock safe systems.
- Compensates for variances in pressure, temperature and flow for accuracy of transmitting concentration ensures patients receive adequate oxygenation, reliable vaporization of inhaled anesthesia drugs.

Isoflurane

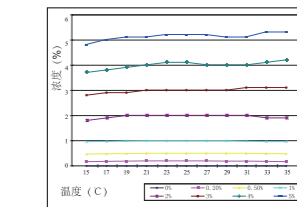


Variation of output with temperature (5L/min)

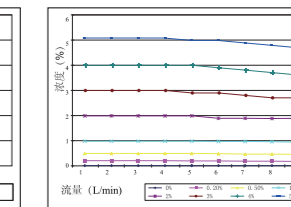


Variation of output with flow rate (Temperature: 20°C)

Enflurane



Variation of output with temperature (5L/min)



Variation of output with flow rate (Temperature: 20°C)

Ergonomic integrated breathing circuit

Technology innovation:

- A closed and semi-closed circuit; natural latex free to avoid allergic reaction. Fully 134°C autoclavable to avoid cross infection, especially for respiratory disease operation.
- Embed design, flow sensor with variable orifice, suitable for different application from child to adult.
- Efficient, integrated heating system, optimized airway design and water trap design to ensure the air flue without effected by condensation. Also ensure the accuracy of operation for long term.
- Bypass design, replacement of absorber canister fast and convenient, alarm function remind the doctor always and let the operation more safe and reliable.

Humanized design:

- Circuit heating system controls the temperature at 35°C (±2°C) 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 CO₂ canister without stopping operation. Special designed chamber assembly monitoring to avoid disoperation.
- Easy for installing cleaning disinfecting and maintaining without any tools and training.

Ventilation

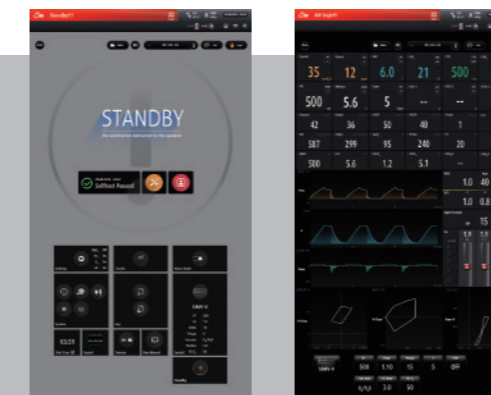
- The large color LCD screen displays all ventilator's setting data, measurement information, loops and numeric / graphic trends. Standard Active Exhalation Valve, Electronic flowmeter,
- Sufficient modes of Ventilation, Volume Control, Pressure Control, SIMV (Volume and Pressure), CPAP / PSV and manual. With Tidal volume 20ml which could apply adults and infant.
- Optional Auxiliary oxygen flowmeter and famous brand SPO₂, EtCO₂ provide more monitoring reference for droctor.

Features

- X66 Anesthesia Workstation
- Applicable for infant, child and adult, simplified patient type selection and parameter setting, Tidal volume 20~1500ml
- 19" high resolution TFT touch screen, user friendly design, multiple patient monitoring configuration meet all kinds of clinical requirement

- Configure 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 O₂ concentration
- Driving gas switching system for O₂ and Air
- Interlock two vaporizer mounting system
- Backup yoke gas supply with pressure gauge monitoring
- Auxiliary O₂ 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, SPONT and PRVC, multiple operation applicable
- Up to 24 hours patient monitoring trend and table for a professional clinical assistant
- Built-in SpO₂, EtCO₂ and Fi/Et anesthesia gas monitoring module for an organization operation environment
- Convenience maintenance, simplified calibration and upgrade procedure



PRVC



PSV



VCV