Product specifications

1.1 Safety specifications

Medical device management category	
Category	Category III medical devices
Electric shock protection type	Category I device, including internal power supply
Electric shock protection class	Defibrillation-proof BF type
Operating mode	Continuous operation
Degree of safety for flammable anesthetic gas	It shall not be used in the presence of flammable anesthetic gas mixed with air or with oxygen or nitrous oxide
Liquid entering protection grade	IP43
Installation and use classification	Mobile equipment

1.2 Physical specifications

Overall dimensions	
Assembling dimensions	Trolley: L*W*H 600mm*500mm*1,030mm Mainframe: L*W*H 305mm*210mm*300mm
Weight (including battery)	6.2 kg
Display screen	
Type	Color screen TFT
Size	10.4 in.
Resolution	1024 * 768 pixels
Function	With touch screen

Interface	
Network interface	Support to connect to PC for software upgrade function
USB interface	Software of the ventilator can be upgraded via the USB port, configuration information and historical data (e.g., trend data, logs, etc.) can also be exported via the USB port, and configuration can be transferred between the machines with the same model via the USB flash disk.
RS-232 interface	It can be connected to medical grade external devices for communication between the ventilator and these external devices.
VGA interface	Output the VGA video signal with the same content as the main display, used to connect the external display (support 1280*800 resolution display)

1.3   Environmental specifications

	Temperature	Air pressure	Relative humidity
Working	-10°C-50°C	62kPa～110kPa	10%~95%
Storage	-20°C - 60°C (oxygen battery: -20°C - 50°C)	50kPa～110kPa	10%-95% (non-condensation)

1.4   Power supply specifications

External AC power supply	
Input voltage	AC 100-240V
Input frequency	50/60Hz
Input current	<2A
External DC power supply	
Input voltage	DC 12V
Total power	≤140VA
Battery in mainframe	
Battery type	Lithium-ion battery

Battery capacity	9600mAh
Rated battery voltage	DC 14.8V
Minimum power supply time	6h (a new fully charged battery operated in standard operating conditions)

1.5 Gas supply specifications

Gas supply specifications	
Gas supply	Medical oxygen
High-pressure gas source pressure	3.0-6.0 bar
High-pressure pipe input connector	DISS connector
Low-pressure gas source pressure	The flow rate is not greater than 8L/min
Low-pressure pipe input connector	CPC quick connector
Inspiratory module	
Peak flow rate	≥200L/min
Nebulizer interface	Outer diameter 6.5mm
Inspiratory branch external interface	Outer diameter 22mm
Expiratory module	
Expiratory branch external interface	Outer diameter 22mm
Resistance	
Inspiratory resistance	No more than 6 cmH2O (adult) at a flow rate of 60 L/min; No more than 6 cmH2O (pediatric) at a flow rate of 30 L/min; No more than 6 cmH2O (infant) at a flow rate of 5 L/min;
Expiratory pressure	No more than 6 cmH2O (adult) at a flow rate of 60 L/min; No more than 6 cmH2O (pediatric) at a flow rate of 30

	L/min; No more than 6 cmH2O (infant) at a flow rate of 5 L/min;
Trigger mode	
Trigger mode	Pressure trigger, flow trigger
Mechanical safety valve	
Mechanical safety valve	≤ 110 cmH2O

1.6   Parameter specification

Control parameters	Range	Accuracy
Respiratory rate	Infant: 0,1～150bpm Adult/Pediatric: 0,1～100bpm	Error: ±1bpm (0-100bpm); ±5% of set value (above 100bpm)
Inspiratory time	0.20-10S	Error: ±0.1s or ±10% of the set value, whichever is greater
Tidal volume	Adult: 100～2000mL Pediatric: 20～300mL Infant: 2～100mL	± (10 mL + 10% of the setting value) (pediatric/adult mode); ± (1.5 mL + 15% of the setting value) (infant mode);;
Oxygen concentration	21%-100%	± (3 vol.%+ 1% of set value) While 500ml， 21%-90% response time ： 140s； While 150ml， 21%-90% response time ： 160s； While 30ml， 21%-90% response time ： 220s
Inspiratory pressure	1-90cmH$_2$O	± (0.9 cmH2O + 10% of the setting value
I:E	4：1～1：10	2:1～1:4：±10% of set value；

		Others：±15% of set value
Upper pressure limit	10-100 cmH$_2$O	± (2cmH$_2$O+ 5% of set value)
Pressure trigger	-20～-0.5 cmH$_2$O	± (0.4 cmH2O + 10% of the setting value)
Positive end expiratory pressure	0-40cmH$_2$O	± (0.9cmH2O + 5% of the setting value)
Pressure support	Closed, 1-90cmH$_2$O	± (0.9cmH2O + 5% of the setting value
Flow trigger	Infant:0.2 ～ 5.0L/min Adult/Pediatric:0.5~20.0 L/min	± (0.1 L/min + 10% of the setting value) (infant mode); ± (0.4 L/min + 10% of the setting value) (adult/pediatric mode)
Pressure rise time	60ms-2000ms	± (0.05s + 20% of the setting value)
Sensitivity of expiratory trigger	5%-85 %	± 5% (absolute error
Oxygen therapy flow	Adult: 2 ～ 65 L/min Pediatric: 2 ～ 25 L/min infant: 2～ 20 L/min	± 2 L/min or ± 15%, whichever is greater
High-level pressure	1-90cmH$_2$O	± (2cmH$_2$O+ 5% of set value)
Low-level pressure	0-40cmH$_2$O	± (2cmH$_2$O+ 5% of set value)
High-level pressure time	0.2-30s	Error: ±0.1s or ±10% of the set value, whichever is greater
Low-level pressure time	0.2-30s	Error: ±0.1s or ±10% of the set value, whichever is greater
Apnea	5-60s	Error: ±0.1s or ±10% of the set value, whichever is greater
Inspiratory pause	0%-60%	
Monitored parameters		
Respiratory rate	0～250bpm	±2bpm or ±5% of actual reading, whichever is greater

Inspiratory tidal volume	0-3,000ml	$\pm$ (2mL+ 15% of actual reading) (infant mode); $\pm$ (3mL+ 15% of actual reading) (pediatric mode); $\pm$15% of actual reading (adult mode)
Expiratory tidal volume	0-3,000ml	$\pm$ (2mL+ 15% of actual reading) (infant mode); $\pm$ (3mL+ 15% of actual reading) (pediatric mode); $\pm$15% of actual reading (adult mode)
Minute volume	0-100L/min	$\pm$ (0.4L/min+15% of actual reading)
I:E	150:1-1:150	2:1～1:4：$\pm$10% of set value； Others：$\pm$15% of set value
Oxygen concentration	21%-100%	$\pm$ (2.5 vol.%+2.5% of actual reading)
Airway pressure	0-105cmH$_2$O	$\pm$ (2cmH$_2$O+4% of actual reading)
I:E	299:1-1:299	
Positive end expiratory pressure	0-100	$\pm$ (2cmH$_2$O+4% of actual reading)
Resistance	5 to 300	
Time constant	50-1000	
Closure pressure(P0.1)	-105-5	$\pm$1-25% of the actual reading
Rapid-shallow-breathing index	0-10000	$\pm$10 of actual reading)
Compliance	0.5-100	

⚠ **Notices:**

- Failure may occur when the ventilator operates beyond the range specified by the manufacturer. Please ensure that the ventilator works under the specified working conditions, so as to maintain stable operation.

- The system overall response time of CO2 concentration is 1 sencond.

- The system response time for oxygen concentration is 3 minutes.

- The response time from10% to 90% for oxygen concentration is 3 minutes.

- When working pressure of the ventilator exceeds the range specified by the manufacturer, performance of the ventilator will be greatly deviated. If the working pressure is too high, the internal sensors may be damaged. Please ensure that working pressure of the ventilator is within the specified range, so as to maintain stable operation.

- When the storage condition exceeds the working condition, the storage state turns into the use state should be placed in the standard environment for more than 8 hours.

1.7 CO_2 specifications

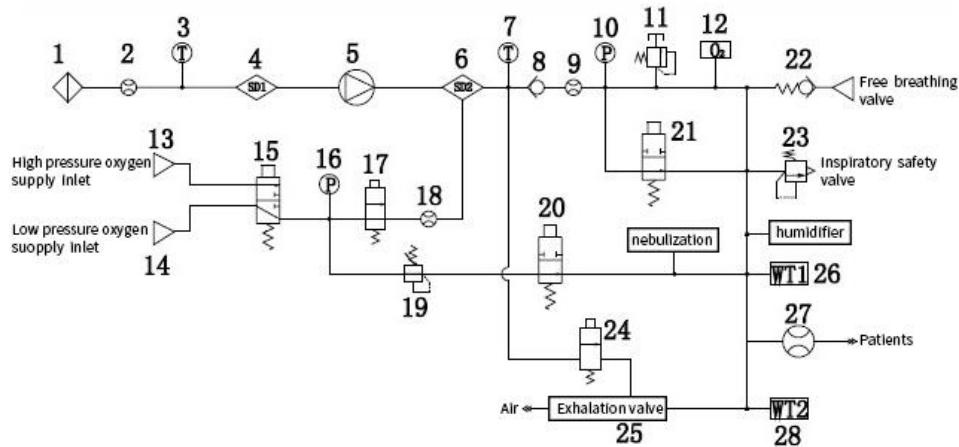| Mainstream CO2 module	
Measuring range: 0-150 mmHg	
Accuracy	(0-40 mmHg) ±2mmHg
	(41-70 mmHg) ±5% of actual reading
	(71-100 mmHg) ±8% of actual reading
	(101-150 mmHg) ±10% of actual reading
Mainstream CO2 alarm limit specification	
Upper limit of ETCO2: 1mmHg-150mmHg, closed	
Lower limit of EtCO2: closed, 1mmHg-149mmHg	

1.8 Gas line diagram

Fig. 53 T6 product structure diagram

1.9 Parts list

Symbol	NAME	Symbol	NAME
1	Air filter cartridge	2	Air inlet flow sensor
3	Temperature sensor	4	Primary acoustic box
5	Turbine	6	Secondary acoustic box
7	Temperature sensor	8	Check valve
9	Fresh gas flow sensor	10	Fresh gas pressure sensor
11	Pressure relief valve	12	Oxygen concentration sensor
13	High pressure oxygen supply inlet	14	Low pressure oxygen supply inlet
15	Oxygen supply control valve	16	Oxygen supply pressure sensor
17	Proportional valve	18	Oxygen flow sensor
19	Pressure relief valve	20	Nebulization control valve
21	Proportional valve	22	Free breathing valve

23	Inspiratory safety valve	24	Proportional valve
25	Exhalation valve	26	Sump tank 1
27	Proximal flow sensor	28	Sump tank 2

1.10 Principle Description

There are two kinds of oxygen supplies, including high pressure oxygen supply and low pressure oxygen supply: high pressure oxygen is connected via high pressure oxygen inlet 13; and low pressure oxygen is connected via low pressure oxygen inlet 14. Select one oxygen supply type: High pressure oxygen supply or low pressure oxygen supply. The oxygen supply enters the secondary acoustic mixing box through the proportional valve 17 and flow sensor 18. Another gas circuit passes through the pressure relief valve 19 and nebulization control valve 20, and connects to the nebulization port. The gas is provided to nebulizate the patient as required.

The air passes through the air filter 1 and the flow sensor 2, and enter the primary acoustic mixing box; with the action of turbine 5, it's then sucked into the secondary acoustic mixing box 6 to mix with oxygen. The fully mixed gas flows through the check valve 8 and flow sensor 9, humidificated by the humidifier, and then enter the patient's lungs.

The flow rate of the exhaled gas at the patient side is monitored by the flow sensor 27, and flow into the exhalation valve 25, with one end of the valve is connected with the gas circuit. The positive end-expiratory pressure is controlled and adjusted by the proportion valve 24.

When the airway pressure exceeds the limiting value of host, the inspiratory safety valve 23 opens; when the airway pressure exceeds a certain threshold value (11KPa), the pressure relief valve 11 opens and connects with atmosphere.

Oxygen concentration sensor 12 is used to measure the oxygen concentration of gas delivered to the patient. 22 is the free breathing valve. When the main unit fails to provide gas, the patient inhales air through 22.