



# Ventilator

# Ventilator

- 15.6/18.5-inch color touch screen, multiple languages available;
- Five waveforms ,four loops display,allow doctors to have a more intuitive understanding of patients;
- Inspiratory valve and expiratory valve for easy cleaning and disinfection;
- Duration for the backup battery lasts up to 4hours, avoiding power interruption during operation;
- Our machine provide the complete ventilation mode supports to patients during hospital,Include invasive, non-invasive and high-flow nasal cannula;



Controlled Parameter	Monitered paremeters
Tidal volume: 2ml~4000ml	Tidal volume: 0-6000mL
Frequency: 1~100 times/minute	Frequency: 0~200 times/minute
Inspiration and Expiration ratio:10:1~1:10	Inspiration and Expiration ratio: 150:1~1:150
Psupp: 0-80cmH2O	Oxygen concentration: 18%~100%
Pinsp: 5-80cmH2O	Leak% (Leakage rate): 0%~100%
PEEP: OFF,1-50cmH2O	PEEP: 0cmH2O ~ 120cmH2O
Oxygen concentration: 21-100vol%	Minute ventilation: 0-100L/min
<b>Invasive ventilation:VCV.PCV.SIMV-V.SIMV-P.CPAP/PSV.PRVC.SIMV-PRVC.DualVent.APRV.VS.SMV.CPRV</b>	
<b>Non-invasive ventilation:CPAP/PSV.PCV.SIMV-P.DualVent.APRV.PSV-S/T</b>	



E-mail: [Medicalsolutionquantum@gmail.com](mailto:Medicalsolutionquantum@gmail.com)

Address: Olympische Stadi om 24, 1076 DE, Amsterdam, Netherlands

All the contents of this product such as model, configuration and discription are for reference only, please refer to real products base on your need.



## Turbine Technical specification

<b>Technical Specification</b>	
<b>Physical Specification</b>	
<b>Dimensions and weight</b>	
Dimensions(H*W*D)	1600mm*630mm*630mm(Including trolley)
	670mm*450mm*304mm(Excluding trolley)
Weight	Approximately 50kg(Including trolley)
	Approximately 20kg(Excluding trolley)
<b>Display</b>	
Screen	18.5/15.6 inch color active matrix capacitive touch screen
Display Resolution	1920*1080
Brightness	Adjustable
<b>Communication interface</b>	
Network Interface, RS-232 interface,Nurse call connector,HDMI interface,USB port	
<b>Ventilation Specification</b>	
Patient type	Adult,Pediatric,Neonate
Ventilation Mode	Invasive ventilation:
	Adult:VCV,PCV,SIMV-V,SIMV-P,CPAP/PSV,PRVC,SIMV-PRVC,DualVent,APRV,VS,SMV,CPRV
	Pediatric:VCV,PCV,SIMV-V,SIMV-P,CPAP/PSV,PRVC,SIMV-PRVC,DualVent,APRV,VS,SMV
	Neonate:VCV,PCV,SIMV-V,SIMV-P,CPAP/PSV,DualVent,APRV,VS
	Non-invasive ventilation:
	Adult and Pediatric:CPAP/PSV,PCV,SIMV-P,DualVent,APRV,PSV-S/T
	Neonate:PCV,nCPAP
Oxygen therapy	Flow range:2-100L/min (Automatic timing function.)
Inspiration flow	Maximum not less than 180L/min
<b>Controlled Parameters</b>	
O <sub>2</sub> %	21 to 100%
Tidal Volume	Adult:100-4000 ml
	Pediatric:20-300 ml
	Neonate:2-100 ml
MV%	25% to 350%
f(Ventilation frequency)	Adult/Pediatric:1-100 /min
	Neonate:1-150 /min
fsimv	1-80 /min
I:E	1:10-10:1
T <sub>insp</sub> (Inspiratory time)	0.1-12 s
T <sub>slope</sub> (Time of pressure rising)	0.00-2.00 s
Thigh	0.1-30 s
Tlow	0.2-30 s

Tpause	OFF,5%-60%
Pinsp	Adult:5-80 cmH2O
	Pediatric:5-80cmH2O
	Neonate:3-80cmH2O
Psupp	0-80cmH2O
Phigh	0-80cmH2O
Plow	0-50cmH2O
PEEP	OFF,1-50cmH2O
Flow trigger	Adult/Pediatric:0.5-20 L/min
	Neonate:0.1-5.0 L/min
Pressure trigger	(-20 to -0.5) cmH2O
Synchronized Tube Resistance compensation	
Tube Diameter	2.5-12.0 mm
Tube compensation ratio	0-100%
<b>Special function</b>	
Manual breathing	Press and preform a ventilation action according to the current ventilation mode.
Expiratory Hold	The maximum time the exhalation can be held is 30 seconds.
Inspiratory Hold	The maximum time you can hold your inhale is 30 seconds.
Nebulization	Refers to atomizing drugs into aerosols and inhaling them into the patient's body for therapeutic purposes.
O2↑	The maximum time for oxygenation is 2 minutes.
Suction	The ventilator starts oxygen enrichment before and after the suction, and disables the otherwise relevant alarm messages during the suction.
P0.1	P0.1 refers to the pressure drop within the first 100ms when the patient begins to breathe spontaneously .
NIF	Refers to the maximum negative pressure produced by the patient's spontaneous breathing within a period of time.
PEEPi	The PEEPi measurement function supports the measurement PEEPi and Vtrap.
PV tools	Doctors can use this function to determine the optimal PEEP for the patient.
Recruitment Tool (SI)	The lung recruitment function is a ventilation strategy to protect the lungs.
Spontaneous Breathing Trial (SBT)	Ventilator will perform PSV according to the preset parameters, while also displaying the real-time values and trends of weaning criteria.
<b>Apnea Ventilation</b>	
Tidal Volume apnea	Adult:100-4000 ml
	Pediatric:20-300 ml
	Neonate:2-100 ml
Papnea	5-80cmH2O
fapnea	Adult/Pediatric:1-100 /min
	Neonate:1-150 /min
Apnea Tinsp	0.1-12 s
<b>Monitored parameters</b>	
Airway pressure range	Ppeak,Pplat,Pmean:-20 to 120 cmH2O
	PEEP:0-120 cmH2O
Tidal Volume range	0-6000ml
Frequency range	ftotal,fmand,fspn:0-200/min
Minute volume range	MVi,MVe,MVspn:
	Adult/Pediatric:0-100 L/min
	Neonate:0-30 L/min
Resistance	0-600 cmH2O

Compliance	0-300 ml/cmH2O
FIO <sub>2</sub>	15-100 vol. %
RSBI	0-9999 1/(min*L)
WOB	0-100 J/min
P0.1	-20 to 0 cmH2O
NIF	-45 to 0 cmH2O
PEEPi	0-120 cmH2O
PIF	Adult/Pediatric:0-180 L/min
	Neonate:0-30 L/min
PEF	Adult/Pediatric:0-180 L/min
	Neonate:0-30 L/min
EEF	Adult/Pediatric:0-180 L/min
	Neonate:0-30 L/min
Blood oxygen saturation	0-100 %
Pulse rate	0-300 bpm
Oxygen therapy	0-100 L/min
Other monitoring parameters	Ti, Te, Leak%, Mvleak, MVspn, Vtespn, Cstat, Ri, Re, RCinsp, RCexp, VTE/IBW, EIF, C20/C, WOBtotal, WOBvent, WOBimp, WOBpat
Waveforms	Airway pressure-time, Flow-time, Volume-time, CO2-time
Loops	Paw-Volume, Flow-Volume, Paw-Flow, Volume-CO2
<b>Alarm settings</b>	
Minute Volume	High: Adu:200-10000 ml
	Ped:200-6000 ml
	Neo:20-3000 ml
	Low: Adu:100-5000 ml
	Ped:100-3000 ml
	Neo:10-1500 ml
Tidal Volume	High: Adu:110-6000 ml
	Ped:25-600 ml
	Neo:3-200 ml
	Low: Adu:50-5995 ml
	Ped:10-595 ml
	Neo:1-195 ml
Airway pressure	High: 10-105 cmH2O
	Low: 1-100 cmH2O
Frequency	High: Adu/Ped:1-100 /min
	Neo:1-160 /min
	Low: Adu/Ped:1-98 /min
	Neo:1-158 /min
FIO <sub>2</sub>	High: 20-100 vol. %
	Low: 18-98 vol. %
Apnea alarm time	5 to 60s
Other alarms	Low battery voltage
	Gas supply pressure low
	Airway obstruction
	Tube disconnected
	PEEP too high
<b>Trend</b>	
Type	Tabular, Graphic
Length	72 hours
Content	Monitor Parameters, Setting Parameters

<b>Log</b>	
Type	Alarm, Operation
Max number	5000
<b>Screen Capture</b>	
Max number	50 pictures
<b>Ventilator components</b>	
O <sub>2</sub> sensor	
Type	Calvanic fuel cell,paramagnetic sensor
Response time	<25s
<b>Neonatal flow sensor</b>	
Flow Range	0.2 to 30 L/min
Resistance	6 cmH <sub>2</sub> O@2.5L/min
<b>MainStream CO<sub>2</sub> Module(Optional)</b>	
EtCO <sub>2</sub> measurement range	0 to 150 mmHg
Resolution	1 mmHg
Waveforms / Loop	CO <sub>2</sub> - time, Volume - CO <sub>2</sub>
System response time	< 2 S
End tidal carbon dioxide	Upper limit:0.1-20 vol.%
	Lower limit:OFF,1-19.9 vol.%
<b>SpO<sub>2</sub> module(Optional)</b>	
Displayed numeric	SpO <sub>2</sub> ,PR
SpO <sub>2</sub> measurement range	0 to 100%
<b>Operation Data</b>	
<b>Environmental specifications</b>	
Temperature	10 to 40°C(operating); -20 to 60°C(storage)
Relative Humidity	10 to 95 % (operating); 10 to 95 % (storage)
Barometric Pressure	62 to 106 kPa (operating); 50 to 106 kPa(storage)
<b>Gas supply</b>	
Gas type	O <sub>2</sub>
Pipe Connector	NIST, DISS
Gas supply pressure	High pressure oxygen source:0.28 to 0.65MPa
	Low pressure oxygen source:Less than 100Kpa
<b>Power and Battery Backup</b>	
Power input voltage	100 to 240 V
Power input frequency	50/60 Hz
Fuse	T3.15AH/250V
Number of batteries	One or Two
Battery type	Build-in Lithium-ion battery, 14.4 VDC,
	6900 mAh
Battery run time	180 min (Powered by one new fully-charged battery in standard working condition)*