

prunus

# Padus 8 Ventilator

## Datasheet



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## Technical Specification

Physical Specification		
<b>Dimensions and Weight</b>		
Dimensions (HxWxD)	1600mmx500mmx650mm	
Weight	35 kg (trolley included) 21 kg (trolley excluded) Note: The overall weight covers the main unit (including one battery), display and trolley, and does not include the breathing tube, CO <sub>2</sub> module, SpO <sub>2</sub> module, support arm and humidifier	
<b>Display</b>		
Screen	17" TFT display	
Resolution	1920 × 1200	
Touch function	Supported	
Brightness	Adjustable	
<b>Communication Interface</b>		
Communication interface	RS232, HDMI, USB, USB OTG, LAN	
Ventilation Specifications		
Patient type	Adult, pediatric, infant	
Ventilation mode	Invasive modes	VCV PCV PRVC SIMV (V) + PS SIMV (P) + PS SIMV (PRVC) + PS CPAP PSV DualPAP VSV
	Non-invasive modes	PCV PSV CPAP HFNC DualPAP SIMV(P)+PS
<b>Controlled Parameters</b>		
O <sub>2</sub> %	21 ~ 100%	
TV (Tidal volume)	Adult: 100 ~ 4000 mL Pediatric: 10 ~ 300 mL Infant: 2 ~ 100 mL	
RR (Ventilation frequency)	Adult/pediatric: 1 ~ 100 bpm Infant: 1 ~ 150 bpm	

I:E	150:1 ~ 1:150
T <sub>insp</sub> (Inspiratory time)	Adult/pediatric: 0.2 ~ 10s Infant: 0.1 ~ 10 s
T <sub>slope</sub> (Time of pressure rising)	0 ~ 2.0 s
T <sub>pause</sub>	OFF, 5% ~ 60%
Flow	Adult: 6 ~ 180 L/min Pediatric: 6 ~ 60 L/min Infant: 2 ~ 30 L/min
P <sub>insp</sub>	1 ~ 100 cmH <sub>2</sub> O
P <sub>supp</sub>	1 ~ 100 cmH <sub>2</sub> O
P <sub>high</sub>	1 ~ 100 cmH <sub>2</sub> O
P <sub>low</sub>	0 ~ 50 cmH <sub>2</sub> O
PEEP	0 ~ 50 cmH <sub>2</sub> O
Flow trigger	Adult/pediatric: 0.2 ~ 20 L/min Infant: 0.1 ~ 5 L/min
Pressure trigger	-20 ~ -0.1 cmH <sub>2</sub> O
ETS (Expiration termination sensitive)	5%~85%
<b>Sigh</b>	
Sigh switch	ON, OFF (This function is OFF by default.)
Interval	1-180 min
Cycles sigh	1-20 bpm
int. PEEP	0-20 cmH <sub>2</sub> O
<b>Automatic Tube Resistance Compliance</b>	
Tube type	ET Tube
Tube I.D.	2~12mm
Compensation	0~100%
<b>HFNC(Oxygen therapy)</b>	
O <sub>2</sub> %	21~100
Flow	Adult/pediatric: 2 ~ 60 L/min Infant: 2 ~ 20 L/min
<b>Leakage Compensation</b>	
Maximum leakage compensation flow	0~100%
<b>Monitoring Parameters</b>	
Airway pressure range	-45 ~ 120 cmH <sub>2</sub> O
Tidal volume range	0 ~ 6000 mL
Frequency range	0 ~ 200 bpm
Minute volume range	0 ~ 100 L/min
Resistance	0 ~ 600 cmH <sub>2</sub> O/(L/s)
Compliance	0 ~ 300 mL/cmH <sub>2</sub> O

Inspired Oxygen (FiO <sub>2</sub> )	15 ~ 100%	
RSBI	0 ~ 9999 bpm/L	
WOB	0 ~ 20 J/L	
P0.1	0 ~ 30 cmH <sub>2</sub> O	
NIF	-45 ~ 0 cmH <sub>2</sub> O	
PEEPi	0 ~ 120 cmH <sub>2</sub> O	
RC <sub>exp</sub>	0 ~ 10 s	
I:E	150:1 ~ 1:150	
PIF (peak inspiratory flow)	0 ~ 300 L/min	
PEF (peak expiratory flow)	0 ~ 300 L/min	
EEF (end expiratory flow)	0 ~ 200 L/min	
Waveforms	Pressure-time, Flow-time, Volume-time Optional: EtCO <sub>2</sub> -time, SpO <sub>2</sub> -time, Esophageal pressure-time Gastric pressure-time	
Loops	Volume-Pressure, Flow-Volume, Flow-Pressure, CO <sub>2</sub> -Volume	
<b>Alarm Settings</b>		
Tidal volume	High	Adult: 110 ~ 6000 mL, OFF Pediatric: 25 ~ 600 mL, OFF Infant: 3 ~ 200 mL, OFF
	Low	Adult: 110 ~ 6000 mL, OFF Pediatric: 20 ~ 600 mL, OFF Infant: 2 ~ 200 mL, OFF
Minute volume	High	Adult: 0.2 ~ 100.0 L/min, OFF Pediatric: 0.2 ~ 60.0 L/min, OFF Infant: 0.02 ~ 30.0 L/min, OFF
	Low	Adult: OFF, 0.1 ~ 50.0 L/min Pediatric: OFF, 0.1 ~ 30.0 L/min Infant: OFF, 0.01 ~ 15.0 L/min
Airway pressure	High	10 ~ 105 cmH <sub>2</sub> O
Respiratory rate	High	1 ~ 160 bpm, OFF
	Low	OFF, 1 ~ 160 bpm
Apnea alarm time	5 ~ 60 s, OFF	
Other alarms	EtC <sub>2</sub> InCO <sub>2</sub> SpO <sub>2</sub> Air source O <sub>2</sub> source PEEP Leakage alarm	

<b>Trend</b>	
Type	Graphic (curve)
Length	96 h
Content	Changes in parameter measurement results.
<b>Log</b>	
Type	Alarms, settings, and function
Max number	20000
<b>Screen Capture</b>	
Max number	At least 20 pictures
<b>Ventilator components</b>	
<b>O<sub>2</sub> Sensor</b>	
Type	Chemical oxygen, paramagnetic sensor
Response time	Chemical oxygen 30 s Paramagnetic sensor 20 s
<b>Infant Flow Sensor</b>	
Flow range	-40~40 L/min
Dead space	1.3 mL
Resistance	4.34 cmH <sub>2</sub> O/(L/min)
<b>SideStream CO<sub>2</sub> Module</b>	
Displayed numeric	EtCO <sub>2</sub>
EtCO <sub>2</sub> measurement range	0 ~ 25%
Resolution	0.1
Waveforms	EtCO <sub>2</sub> -time
Sampling rate	50 ± 10 sml/min
System response time	< 3s
Rise time	≤ 350 ms
EtCO <sub>2</sub> High alarm limits	1%~26%
EtCO <sub>2</sub> Low alarm limits	OFF, 0%~25%
<b>TiniStream CO<sub>2</sub> Module</b>	
Displayed numeric	EtCO <sub>2</sub> , FiO <sub>2</sub> (optional)
EtCO <sub>2</sub> measurement range	0 ~ 20%
Resolution	0.1
Waveforms	EtCO <sub>2</sub> -time
Sampling rate	70, 100, 120, 150ml/min ±8ml/min
System response time	≤ 2 s
Rise time	CO <sub>2</sub> ≤ 180 ms O <sub>2</sub> ≤ 600 ms
EtCO <sub>2</sub> High alarm limits	1%~20%

EtCO <sub>2</sub> Low alarm limits	OFF, 0%~19%	
<b>MainStream CO<sub>2</sub> Module</b>		
Displayed numerics	EtCO <sub>2</sub>	
EtCO <sub>2</sub> measurement range	0%~25%	
Resolution	Within the EtCO <sub>2</sub> range of 0%~15%, the error is $\pm(0.2\%+2\%$ of the actual reading)	
<b>SpO<sub>2</sub> Module</b>		
Displayed numeric	SpO <sub>2</sub> , PR	
SpO <sub>2</sub> measurement range	0% ~ 100%	
PR measurement range	25 ~ 250 bpm	
Waveform	Pleth	
SpO <sub>2</sub> High alarm limits	81% ~ 100%	
SpO <sub>2</sub> Low alarm limits	80% ~ 99%	
<b>Operation Data</b>		
Temperature	Operation	10 ~ 40°C
	Storage and transport	-20 ~ 60°C
Relative humidity (non-condensing)	Operation	10% ~ 95% R.H.
	Storage and transport	10% ~ 95% R.H.
Barometric pressure (storage)	Operation	54 ~ 106 kPa
	Storage and transport	50 ~ 106kPa
<b>Gas Supply</b>		
Gas type	Air, O <sub>2</sub>	
Pipe connector	NIST or DISS	
Gas supply pressure	280 ~ 650 kPa	
Peak flow in case of single supply gas	$\geq 180$ L/min	
<b>Power and Battery Backup</b>		
Power input voltage	100 - 240 V~	
Power input frequency	50/60 Hz	
Power input current	2.5 - 1.2 A	
Fuse	T3.15 AH 250 V × 2, $\phi 5 \times 20$	
Number of batteries	1 (standard)	
	2 (optional)	
Rated battery voltage	11.1 VDC	
Battery type	Lithium ion battery	
Battery capacity	The capacity of single battery is 7800 mAh	
	The capacity of two batteries is 15600 mAh	

Battery run time	At least 90 minutes (when a new fully charged battery is used in typical operating mode) At least 180 minutes (when two new fully charged batteries are used in typical operating mode)
Battery charging time	About 4 hours (single battery) About 8 hours (two batteries)
<b>Special Functions and Procedures</b>	
Inspiratory hold	
Expiratory hold	
PV tool	
Automatic tube compensation	
Sigh	
Manual ventilation	
Nebulizer	
Suction	
Flow support	
P0.1	
Stress index	
Maximum negative inspiratory pressure	
PEEP <sub>i</sub>	
Esophageal and gastric pressure monitoring	
PTP	
Work of breathing	
Dynamic lung display	
Screen lock	
Alarm mute	