

prunus

PN50 Ventilator

Datasheet



prunus

Technical Specification

Basic information	
Dimensions and weight	
Dimensions (HxWxD)	370 mm * 436 mm * 230 mm (Trolley excluded) 1406 mm * 589 mm * 616 mm (Trolley included)
Weight	9.0 kg (Main unit without battery) 9.5 kg (Main unit with one battery) 16.5 kg (Including trolley and support arm) (The main unit includes 17.3-inch TFT touch screen and one battery, does not include the breathing tube, CO2 module, SpO2 module, support arm.)
Display	
Display	
Screen	17.3-inch TFT touch screen
Resolution (H)x(V)	1920 × 1200
Brightness	Adjustable from 0% ~ 100%
Communication interface	
Communication interface	RJ45, USB, HDMI, Nurse Call, RS-232
Basic Specifications	
Patient Type	Adult, Pediatric
Principle Of Ventilation	Electronically driven and controlled
Ingress Protection	IP22
Overall Noise	≤45dB
Ventilation Specifications	
Ventilation Mode	CPAP S/T S T PCV VCPS (Optional) PPV (Optional) S/T+ (Optional) HFNC
Controlled Parameters	
CPAP	4 ~ 30 cmH2O
P _{exp} (Expiratory Pressure)	4 ~ 30 cmH2O
P _{insp} (Inspiratory Pressure)	4 ~ 50 cmH2O
P _{supp} (Support Pressure)	4 ~ 50 cmH2O
P _{backup} (Backup Pressure)	4 ~ 50 cmH2O

P _{min} (Minimun Pressure)	3 ~ 35 cmH2O
P _{max} (Maximun Pressure)	6 ~ 50 cmH2O
VT (Tidal Volume)	50 ~ 2500 ml
VT _{max} (Maximun Tidal Volume)	200~3500 ml
FiO ₂ (Fraction of Inspired Oxygen)	21 ~ 100%
HFNC (Oxygen Therapy) Flow	2.0 ~ 80.0 L/min
f (Frequency)	1 ~ 60 bpm
f _{backup} (Backup Frequency)	1 ~ 60 bpm
Ti (Inspiratory Time)	0.20 ~ 5.00 s
Ti _{max} (Maximun Inspiratory Time)	0.20 ~ 5.00 s
T _{slope} (Pressure Rise Time)	1 ~ 6 levels
P-Flex (Pressure Relief)	OFF, 1 ~ 3
Max Inspiratory Flow Rate	≥280 L/min
Trigger (Inspiratory Trigger)	Normal, 1 ~ 6 Normal: Enable Sync Enhancement
E-Cycle (Expiratory Cycle)	-2, -1, Normal, 1 ~ 6 Normal: Enable Sync Enhancement
PPV% (Percentage of Proportional Pressure Ventilation)	OFF, 10 ~ 100 %
Max R (Maximum Viscous Resistance)	OFF, 2 ~ 100 cmH2O/L/s
Max E (Maximum Elastic Resistance)	OFF, 10 ~ 100 cmH2O/L
T _{ramp} (Ramp Time)	1 ~ 60 min
EPAP _{max} (Maximun Expiratory Pressure)	4 ~ 30 cmH2O
EPAP _{min} (Minimun Expiratory Pressure)	4 ~ 30 cmH2O
I:E	4:1 ~ 1:10
Monitoring Parameters	
P _{peak} (Airway Peak Pressure)	0 ~ 100 cmH2O
PEEP	0 ~ 100 cmH2O
PEEPi	0 ~ 30 cmH2O
PEEPi+PEEP	0 ~ 100 cmH2O
FiO ₂	15 ~ 100 %
VT (Tidal Volume)	0 ~ 4000 ml
HFNC (Oxygen Therapy) Flow	0 ~ 100 L/min
MV (Minute Volume)	0 ~ 100 L/min
MV _{spn} (Spontaneous Minute Volume)	0 ~ 100 L/min
f _{total} (Total Frequency)	0 ~ 200 bpm
f _{spn} (Spontaneous Frequency)	0 ~ 200 bpm
Pt.leak (Patient Leak)	0 ~ 200 L/min

Tot.leak (Total Leak)	0 ~ 200 L/min
Pt.Trig (Patient Trigger)	0 ~ 100 %
Ti/Ttot	0 ~ 91 %
PEF (Peak Expiratory Flow)	0 ~ 200 L/min
Pes (Esophageal Pressure)	-45 ~ 120 cmH2O
Pga (Gastric Pressure)	-45 ~ 120 cmH2O
PL (Lung Pressure)	-45 ~ 120 cmH2O
PEEPes (Esophageal Positive End Expiratory Pressure)	-45 ~ 120 cmH2O
Pdi (Diaphragal Pressure)	-45 ~ 120 cmH2O
Palv (Alveolic Pressure)	-45 ~ 120 cmH2O
P(el)L (Lung Elastic Recoil Pressure)	-45 ~ 120 cmH2O
PtpI (Inspiratory Transpulmonary Pressure)	-45 ~ 120 cmH2O
PtoE (Expiratory Transpulmonary Pressure)	-45 ~ 120 cmH2O
Δ PL	-45 ~ 120 cmH2O
ROX (Respiratory Rate-Oxygenation)	1 ~ 100
SPO2 (Saturation of Peripheral Oxygen)	0 ~ 100 %
PR (Pulse Rate)	25 ~ 250 L/min
PI (Perfusion Index)	0.05 ~ 20 %
Waveforms	Pressure-Time (P-T) Flow-Time (F-T) Volume-Time (V-T) CO2-Time (CO2-T) (Optional) Oxygen Saturation-Time (SPO2-T) (Optional)
Loops	Pressure-Volume (P-V) Flow-Volume (F-V) Pressure-Flow (P-F) Volume-CO2 (V-CO2) (Optional) Esophageal Pressure-Volume (Pes-V) (Optional) Transpulmonary Pressure-Volume (PL-V) (Optional)
Alarm Information	
Alarm Information	
Physiological Alarms	FiO ₂
	Respiratory Rate
	Minute Volume
	Airway Pressure
	Apnea

	CPAP
	PEEP
	Tidal Volume
	Inspiratory Pressure
	Low leakage - risk of re - breathing CO ₂
Technical Alarms	Power failure
	Inspiratory pressure sensor failure
	Oxygen proportioning valve failure
	Tube disconnection
	Tube failure
Other Alarm	Low battery capacity
	Low gas pressure
	Tube blockage
	Turbine failure
Alarm Setting	
Airway Pressure	Upper limit 10 ~ 55 cmH ₂ O
	Lower limit OFF, 1 ~ 50 cmH ₂ O
Tidal Volume	Upper limit OFF, 50 ~ 4000 ml
	Lower limit OFF, 10 ~ 3990 ml
Respiratory Rate	Upper limit OFF, 2 ~ 120 bpm
	Lower limit OFF, 1 ~ 119 bpm
Minute Ventilation	Upper limit OFF, 1 ~ 100 L/min
	Lower limit OFF, 0.5 ~ 99.5 L/min
FiO ₂ (Low pressure O ₂ supply)	Upper limit OFF, 20 ~ 100 %
	Lower limit OFF, 18 ~ 98 %
FiO ₂ (High pressure O ₂ supply)	Internal alarm upper limit min(setting + max(7%, setting * 10%), 100%)
	Internal alarm lower limit max(18%, setting - max(7%, setting * 10%))
EtCO ₂	Upper limit 1~26% (Masimo), 1~21% (Witleaf)
	Lower limit OFF, 0~25% (Masimo), 0~20% (Witleaf)
InCO ₂	1~26% (Masimo), 1~21% (Witleaf)
SPO ₂	Upper limit 2 ~ 100 %
	Lower limit 0 ~ 98 %
Desat	0 ~ 98 %
PR	Upper limit 17 ~ 300 /min
	Lower limit 15 ~ 298 /min
Apnea	OFF, 5 ~ 60 s
Gas Pressure	Upper limit 190 ~ 750 kPa
	Lower limit 180 ~ 740 kPa
Historical Data	
Historical Data	

Types	Trend graphs, waveform review, event logs, bar graphs
Content	Monitoring parameters, settings
Data Length	168 hours
Log Types	Alarm logs, general settings, special function usage
Max Log Storage	20000
Special Function & Parameter	
Special Function & Parameter	
Special Functions	Increase O2
	Delayed pressure ramp-up
	Pressure release
	Automatic leak compensation
	Suction
	Nebulization
	Loop graph
Leakage Compensation	120 L/min
Optional Functions	
SPO2, EtCO2, Auxiliary Pressure	
Ventilator Component	
O2 Sensor Type	Chemical
	Paramagnetic (Optional)
Response Time	< 30 s
MainStream CO₂ Module (Masimo)	
Displayed numerics	InCO ₂ , EtCO ₂
EtCO ₂ measurement range	0% ~ 25%
Response Time	< 1 s
Rise time	≤ 90 ms
Waveforms	CO ₂ -Time
Loops	CO ₂ -Volume
EtCO ₂ high alarm limits	1 ~ 26%
EtCO ₂ low alarm limits	OFF, 0 ~ 25%
InCO ₂ Alarm Setting	1~26%
MainStream CO₂ Module (Witleaf)	
Displayed numerics	InCO ₂ , EtCO ₂
EtCO ₂ measurement range	0% ~ 20%
Response Time	< 1 s
Rise time	≤ 90 ms
Waveforms	CO ₂ -Time
Loops	CO ₂ -Volume
EtCO ₂ high alarm limits	1 ~ 21%
EtCO ₂ low alarm limits	OFF, 0 ~ 20%
InCO ₂ Alarm Setting	1 ~ 21%

SideStream CO₂ Module (Masimo)	
Displayed numerics	InCO ₂ , EtCO ₂
EtCO ₂ measurement range	0% ~ 25%
Response Time	< 3 s
Sampling rate	50 ± 10 ml/min
Rise time	≤ 200 ms
Waveforms	CO ₂ -Time
Loops	CO ₂ -Volume
EtCO ₂ high alarm limits	1 ~ 26%
EtCO ₂ low alarm limits	OFF, 0 ~ 25%
InCO ₂ Alarm Setting	1 ~ 26%
SideStream CO₂ Module (Witleaf)	
Displayed numerics	InCO ₂ , EtCO ₂
EtCO ₂ measurement range	0% ~ 20%
Response Time	<3 s
Sampling rate	50 ± 10 ml/min
Rise time	≤ 400 ms
Waveforms	CO ₂ -Time
Loops	CO ₂ -Volume
EtCO ₂ high alarm limits	1 ~ 21%
EtCO ₂ low alarm limits	OFF, 0 ~ 20%
InCO ₂ Alarm Setting	1 ~ 21%
SPO₂ Module	
Displayed numerics	SPO ₂ , PR
SPO ₂ measurement range	0% ~ 100%
PR measurement range	25 ~ 250 bpm
Waveforms	SPO ₂ -Time
SPO ₂ high alarm limits	2% ~ 100%
SPO ₂ low alarm limits	0% ~ 98%
PR high alarm limits	17 ~ 300 bpm
PR low alarm limits	15 ~ 298 bpm
Operation Data	
Environmental Specifications	
Temperature	5 ~ 40°C (Operation)
	-20 ~ 60°C (Storage and transport)
Relative Humidity	10 ~ 95% (Operation)
	5 ~ 95% (Storage and transport)
Atmospheric Pressure	52 ~ 106 kPa (Operation)
	50 ~ 106 kPa (Storage and transport)
Gas Supply	
Gas Type	O ₂
Pipe connector	NIST, DISS

High pressure O ₂ supply	280 ~ 600 kPa, $\geq$ 180 L/min
Low pressure O ₂ supply	$\leq$ 100 kPa, $\leq$ 15 L/min
Power and Battery Backup	
AC Input	100 ~ 240 VAC, 50/60 Hz, 2.4 ~ 1.0A
DC Input	12 ~ 24V, 15 ~ 8A
Number of batteries	One
	Two (Optional)
Battery type	Build-in Lithium-ion battery, 11.1V 7800mAh
Battery running time	180 min (Powered by one new fully charged battery in standard working condition)
	360 min (Powered by two new fully charged batteries in standard working condition)

prunus

prunus

Shenzhen Prunus Medical Co., Ltd.

6th Floor and Zone A of 9th Floor, Block C, No. 71-3, Xintian Road, Fuyong Street
Bao'an District, 518103 Shenzhen, Guangdong, PEOPLE'S REPUBLIC OF CHINA

Tel: +86 755 2689 9781
Fax: +86 755 2689 9789
E-mail: international@prunusmedical.com
Web: www.prunusmedical.com