

Multi-purpose Portable Ventilator

MTV1000



ICU Grade Ventilator

Monitoring FiO_2 , options SpO_2 and EtCO_2

Electronic PEEP and Blender control

Built-in Air generator - Turbine blower type

Built-in rechargeable Battery

Dual & Single Limb circuit Compatible

As MEKICS's products are ceaselessly improved, the actual product may differ from the descriptions, specifications, and the pictures in this publications.



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Features and Short form Specifications

MTV1000 is portable ventilator with Turbine, Oxygen blender and Optional SpO_2 , EtCO_2 functions

This system is versatile device to care acute and sub-acute life support in unlimited place

Display Monitor	7" Color TFT, Touch Screen & Knob with communication port
Ventilation Mode	PRVC, PRVC-SIMV, V-ACV, V-SIMV, PACV, P-SIMV, AUTO, Spont+/CPAP, O ₂ Stream®, Apnea Backup
Breathing Circuit	Dual Limb or Single Limb Circuit applicable
Lung mechanics	Insp. Hold
Optional	Accessory : 12.1" Ext. TFT LCD Monitor, Nasal Cannula for O ₂ Stream® Vital Sign Functions : SpO_2 , EtCO_2 Nebulizer function : Pneumatic Cart : Mobile Cart for MTV1000, Mobile Cart for ICU package (12.1" LCD Monitor)

Detail Specification

Ventilator Data (Setting / performance)

Ideal Body weight	1 ~ 150 kg (Prs Mode), 10 ~ 150 kg (Volume Mode) * MTV1000 is not allowed to apply for neonatal patients
Tidal Volume	50 ~ 2500 mL
Inspiratory pressure	5 ~ 80 cmH ₂ O (Peep+Pins < 100 cmH ₂ O)
Pressure support	0 ~ 60 cmH ₂ O (Peep+PSV < 100 cmH ₂ O)
Respiratory rate	0 ~ 120 BPM
Inspiratory time	0.2 ~ 9.9 sec
PEEP / CPAP	0 ~ 50 cmH ₂ O
Enable Ins. Trigger (En-sense)	10 ~ 80 % of Inhaled volume
Ex. Trigger Sensitivity (Ex-trig)	10 ~ 80 % of peak Ins. Flow
Ins Trigger sensitivity	Pressure : 0.5 ~ 20 cmH ₂ O / OFF Flow : 0.5 ~ 20 LPM / OFF
Inspiratory Pressure limit	5 ~ 80 cmH ₂ O in PRVC
FiO ₂ %	21 ~ 100 %
Rising Time (Trise)	(PS) : Fast / Medium / Slow
O ₂ Stream®	Flow : 15 ~ 60 LPM @ O ₂ Stream®
Mask (Leak Compensation)	OFF / ON (up to 20 LPM)

► Setup Function

BTPS	OFF / Manual Humid / Manual Dry
Temp Room Air	0 ~ 50 °C
Type of Limb	Dual Limb / Single-Limb (use with external exhalation valve)
Altitude	-100 ~ 5,000 m
Proximal Pressure Sensor	ON / OFF
Neb Time (Optional)	10 ~ 180 min
BWF	5 mL/kg ~ 15 mL/kg
O ₂ Sensor Disable	ON / OFF
Sound volume	10, 40, 70, 100 %

Display Data

Parameters	Setting parameters, patient status parameters, Alarm status, I:E ratio
Graphic Waveform	Pressure-Time, Flow-Time, Volume-Time
Trend	VE/min, Pmean, Vte, CL, PAW
Loops	Pressure-volume, Flow-volume, Pressure-Flow
EVENT	1,000 event log
Optional Vital information	SpO_2 , PR / EtCO_2 , iCO ₂

Alarm Setting

High tidal volume	(Expiratory volume) 20 ~ 2500 mL / OFF
Low tidal volume	(Expiratory volume) 10 ~ 2400 mL / OFF
High min volume	(Expiratory min volume) 0.5 ~ 50 LPM
Low min volume	(Expiratory min volume) 0.0 ~ 49 LPM
High respiration rate	2 ~ 150 BPM
Low respiration rate	0 ~ 148 BPM
High peak airway pressure	0 ~ 120 cmH ₂ O / OFF
Low peak airway pressure	OFF / 0 ~ 110 cmH ₂ O / OFF
High O ₂ %	0 ~ 100 % / OFF
Low O ₂ %	0 ~ 80 % / OFF
Airway leak	10 ~ 500 mL / OFF
Apnea	2 ~ 60 sec

Specifications MTV1000

► Option, SpO₂

High SpO ₂	52 ~ 100 % / OFF
Low SpO ₂	51 ~ 100 %
High pulse rate (SpO ₂)	26 ~ 250 BPM
Low pulse rate (SpO ₂)	25 ~ 249 BPM

► Option, EtCO₂

High EtCO ₂	0.0 ~ 15.0 %
Low EtCO ₂	OFF / 0.0 ~ 14.9 %
High inspired CO ₂	0.0 ~ 15.0 %
Low inspired CO ₂	OFF / 0.0 ~ 14.9 %
High respiration rate (EtCO ₂)	3 ~ 150 BPM
Low respiration rate (EtCO ₂)	2 ~ 149 BPM

Lung Mechanics

Inspiration hold	Measures patient's lung compliance
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Hot Keys

Manual inflation	Delivers one mandatory breath
Key lock	Key & LCD Touch Screen Lock
Freeze	Graph Freeze
Alarm silence	Mute audible alarms for 2 min
Alarm reset	Clear visual indicators and messages
Neb Key	Nebulizer ON / OFF

Electrical

Power Source	100-240 VAC, 50-60 Hz
Power Consumption	Max 200 VA
Battery	Li-ion Battery 10.8 VDC / 8800 mAh Operating Time : Max 3 hrs (Std)

Physical

Weight	8 kg (with Internal battery)
Dimensions	W250 x D156 x H371 mm

Environmental

Transport / Storage	Temperature : -20 ~ 70 °C Relative humidity : 0 ~ 95 %, non-condensing
Operating	Temperature : 10 ~ 40 °C Relative humidity : 10 ~ 90 %, non-condensing
Gas Inlet Supply	A. Pressure : 700 ~ 1060 hPa (~ 2000 m) O ₂ (High pressure) : 2.46 ~ 6.32 kgf/cm ² / 2.4 ~ 6.2 bar / 35 ~ 90 psig O ₂ (Low flow) : Source from Oxygen Concentrator or Similar

Language

English / Spanish / Italian / Polish / Turkish / Chinese

Warranty

Two years

Certifications

IEC 60601-1:2005+CORR.1:2006+CORR.2:2007+A1:2012
IEC 60601-1-2:2007
IEC 60601-1-6:2010+A1:2013
IEC 60601-1-8:2006+Am.1:2012
IEC 62366:2007+A1:2014
ISO 80601-2-12:2011
ISO 80601-2-61:2011