

# Specifications

## Model : MV2000 (EVO 5)

### 1. Features and Short form Specifications

MV2000 EVO5 is ICU ventilator with useful and variety mode to care intensive lung disease patient. This system have basic to advanced ventilation mode and high frequency ventilation mode. MV2000 EVO5 is good solution for variety clinical requirement in Intensive lung care.		
Display		15" Color TFT 1024*768, Touch Screen & Knob
		HDMI (External Monitor)
Peripheral port		USB (Screen Capture), Micro SD (SW Upgrade)
Ventilation Mode		PACV, PSIMV, VACV, VSIMV, Spont, Apnea Back-up ventilation, O <sub>2</sub> Stream®, PRVC, Bi-Level, AwPRV, AutoVent®, TCPL-AC, TCPL-SIMV, PRVC-SIMV, CPR
Lung mechanics		Ins Hold, Ex Hold, PV Tool
Optional	Ventilation Mode	SHFV®, DHFV®
	Lung Mechanics	Paux (Esophageal & Tracheal Pressure)
	Accessory	Proximal Sensor (Pressure / Flow), Nasal Cannula for O <sub>2</sub> Stream®
	Vital Sign Functions	SpO <sub>2</sub> , EtCO <sub>2</sub>
	Cart	Mobile Cart for MV2000

### 2. Detail Specification

□ Ventilator Data (Setting / performance)		
Predicted Body weight		~ 150 kg
Tidal Volume		2 ~ 2500 mL
Inspiratory pressure		0 ~ 99 cmH <sub>2</sub> O
Pressure support		0 ~ 99 cmH <sub>2</sub> O, above Peep Max 99 cmH <sub>2</sub> O
Respiratory rate		0 ~ 150 BPM
Apnea Backup type		PRVC, VACV, PACV, TCPL-AC & SIMV
Inspiratory time		0.1 ~ 9.9 sec
Pause time		0 ~ 2.0 sec
PEEP / CPAP		0 ~ 60 cmH <sub>2</sub> O
Enable Ins. Trigger (En-sense)		10 ~ 80 % of Inhaled volume
Exhalation. trigger Sensitivity (Ex-sens)		Off, 5~80 % of peak Ins. Flow
F-end (Flow end)		25 ~ 100 % of peak flow
Trigger sensitivity :	Pressure	0.1 ~ 20 cmH <sub>2</sub> O
	Flow	0.1 ~ 20 LPM
FiO <sub>2</sub> %		21 ~ 100 %
Sigh		OFF / Delivers one sigh breath every 30 , 60 , 90 , 120 breaths Sigh volume = Set tidal volume x 1.5
Leak Compensation (Mask)		OFF / ON (up to 25 LPM)
Adaptive Flow		OFF / ON
Rising Time (Trise)	(PCV)	0.1 ~ 2.0 sec
Rising Time, PSV	(PSV)	0.1 ~ 0.5 sec
Flow Limit	(PSV)	20 ~ 60 LPM / OFF, 10 ~ 30LPM / OFF (Neonate)
Inspiratory Pressure limit	(PRVC)	1 ~ 100 cmH <sub>2</sub> O
Flow setting	(TCPL)	5 ~ 120 LPM @ TCPL

PSV upper	(Bi-level)	0 ~ 99 cmH <sub>2</sub> O
PEEP HIGH (i-PEEP)	(Bi-level, APRV)	0 ~ 99 cmH <sub>2</sub> O
PEEP LOW (e-PEEP)	(Bi-level, APRV)	0 ~ 60 cmH <sub>2</sub> O
TH PEEP (i-time)	(Bi-level, APRV)	0.2 ~ 50 sec
TL PEEP (e-time)	(AwPRV)	0.1 ~ 49.9 sec
Volume %	(AutoVent)	70 ~ 300 % @ AutoVent
Flow setting in O <sub>2</sub> Stream	(O <sub>2</sub> Stream)	5 ~ 60 LPM @ O <sub>2</sub> Stream
Beep Guide	(CPR)	OFF, 60~120 BPM
Beep Interval	(CPR)	OFF, 1~30 min
<b>[Optional Mode Setting]</b>		
Power	(SHFV, DHFV)	1 ~ 100 %
Mean Airway Pressure	(SHFV, DHFV)	5 ~ 60 cmH <sub>2</sub> O
High Frequency	(SHFV, DHFV)	2 ~ 20 Hz
IMV Ex duration (Dual)	(DHFV)	0.2 ~ 6.0 sec
R. Rate	(DHFV)	1 ~ 120 BPM
<b>[Setup Function]</b>		
BTPS		OFF / BTPS / STPD
Proximal Flow / Pressure Sensor		OFF / Prox.Pressure / Prox. Pressure & Flow / Aux.Pressure
Neb Time		10 ~ 180 min
BWF		1 mL/kg ~ 15 mL/kg
Tube Compensation		ON / OFF
O <sub>2</sub> Sensor Disable		ON / OFF
Sound volume		10 ~ 100 %
<input type="checkbox"/> <b>Display Data</b>		
Parameters		Setting parameters, patient status parameters, Alarm status, I:E ratio
Graphic Waveform		Pressure-Time, Flow-Time, Volume-Time
Trend		VE/min, Pmean, Ppeak, PEEP, Vte, RR, CL, RA, SpO <sub>2</sub> , PR, iCO <sub>2</sub> , EtCO <sub>2</sub>
Loops		Pressure-Volume, Flow-Volume, Pressure-Flow
EVENT		1,000 event log.
Optional Vital information		SpO <sub>2</sub> , PR / EtCO <sub>2</sub> , iCO <sub>2</sub>
<input type="checkbox"/> <b>Alarm Setting</b>		
High tidal volume (Vte)		5 ~ 2500 mL / OFF
Low tidal volume (Vte)		0 ~ 2500 mL
High min volume (Vte, min)		0.1 ~ 50 LPM
Low min volume (Vte, min)		0.0 ~ 49.9 LPM
High respiration rate		3 ~ 180 BPM
Low respiration rate		2 ~ 179 BPM
High PEEP		0 ~ 70 cmH <sub>2</sub> O
Low PEEP		0 ~ 69 cmH <sub>2</sub> O / OFF
High peak airway pressure		1 ~ 120 cmH <sub>2</sub> O
Low peak airway pressure		0 ~ 119 cmH <sub>2</sub> O
High O <sub>2</sub> %		19 ~ 100 % / OFF

Low O <sub>2</sub> %		18 ~ 100 %
Airway leak		50 ~ 500 mL / OFF
Apnea		2 ~ 60 sec
<b>[Option, SpO<sub>2</sub>]</b>		
High SpO <sub>2</sub>		52 ~ 99 % / OFF
Low SpO <sub>2</sub>		51 ~ 99 %
High pulse rate (SpO <sub>2</sub> )		30 ~ 250 BPM
Low pulse rate (SpO <sub>2</sub> )		25 ~ 245 BPM
<b>[Option, EtCO<sub>2</sub>]</b>		
High EtCO <sub>2</sub>		0.1 ~ 15.0 %
Low EtCO <sub>2</sub>		OFF / 0.0 ~ 14.9 %
High inspired CO <sub>2</sub>		0.1 ~ 15.0 %
Low inspired CO <sub>2</sub>		OFF / 0.0 ~ 14.9 %
High respiration rate (EtCO <sub>2</sub> )		2 ~ 180 BPM
Low respiration rate (EtCO <sub>2</sub> )		1 ~ 179 BPM
<input type="checkbox"/> <b>Lung Mechanics</b>		
PV Tool		P Limit 5 ~ 60 cmH <sub>2</sub> O, Time
Inspiration hold		Measures patient's lung compliance and resistance, Elasticity, Time constant
Expiration hold		Measures auto-PEEP
<input type="checkbox"/> <b>Hot Keys</b>		
Manual inflation		Delivers one mandatory breath
Neb Key		Nebulizer ON / OFF
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
100 % O <sub>2</sub>		Delivers 100 % oxygen for 3 min
<input type="checkbox"/> <b>Electrical</b>		
Power Source	AC	100-230 VAC, 1 A, 50/60 Hz
Battery	Internal Batt.	PB-Acid 12 V, 7000 mA
	Operating Time	180 min Max
<input type="checkbox"/> <b>Communication</b>		
LAN		100 MHz for CMS
<input type="checkbox"/> <b>Physical</b>		
Weight	Overall	51 kg (main unit with LCD monitor w/ cart)
Dimensions	Overall	W500 x D598.9 x H1419.8 mm
	Main unit	W332 x D599.1 X H388 mm
	Display monitor	W400 x D48 x H276 mm
	Mobile Cart (option)	W500 x D598.9 x H725 mm
<input type="checkbox"/> <b>Environmental</b>		
Transport/Storage	Temperature	-20 ~ 70 °C
	Relative humidity	0 ~ 95 %, non-condensing

Operating	Temperature	10 ~ 40 °C
	Relative humidity	10 ~ 90 %, non-condensing
	A. Pressure (Altitude)	700 ~ 1060 hPa ( ~ 2000 m)
Gas Inlet Supply	Air	2.46 ~ 6.32 kgf/cm <sup>2</sup> / 2.4 ~ 6.2 bar / 35 ~ 90 psig
	O <sub>2</sub>	2.46 ~ 6.32 kgf/cm <sup>2</sup> / 2.4 ~ 6.2 bar / 35 ~ 90 psig
<input type="checkbox"/> <b>Language</b>		
English / Chinese / Italian / Turkish / Polish / Spanish / Korean		

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