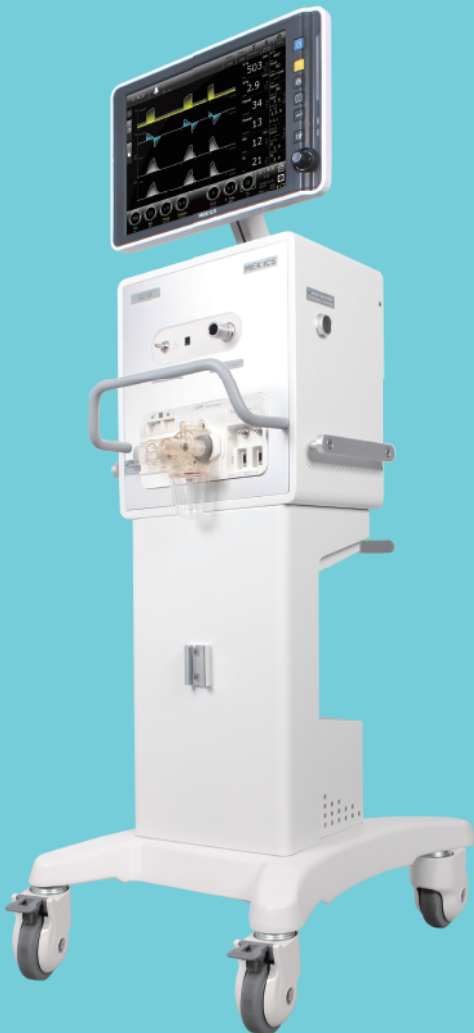


# Intensive Care Unit Ventilator

## MV2000 EVO 5



Easy operation with Large screen(15 inch Color TFT with touch)

Leak Compensation with patient Synchrony

Lung protective ventilation mode with AutoVent®

Available from neonatal(HFV) to adult care

Ventilator weaning is possible without disconnection from controlled ventilation to T-piece trail

Reliability and Easy maintenance with Smart PC Viewer

Dual Nebulizer system (Micro-pump Nebulizer & Pnuematic Nebulizer)

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

## Features and Short form Specifications

MV2000 EVO 5 is ICU ventilator with useful and verity 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 verity 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 Pause, Ex Pause, 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

## Detail Specification

### Ventilator Data (Setting / performance)

Ideal 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
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
Exh. trigger Sensitivity (Ex-sense)	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
Mask (Leak Compensation)	OFF / ON (up to 25 LPM)
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)
<b>► Optional Mode Setting</b>	
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
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 %

### 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, 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>

## Alarm Setting

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

### ► Option, SpO<sub>2</sub>

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

### ► Option, EtCO<sub>2</sub>

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

## Lung Mechanics

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

## Hot Keys

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

## Electrical

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

## Communication

RS232	COM1	115200 BPS for CMS
LAN		100 MHz for CMS or EMR (HL7 support)

## Physical

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

## Environmental

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

## Language

English / Chinese / Italian / Turkish / Polish / Spanish

## 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  
 IEC 62304:2006  
 ISO 80601-2-12:2011  
 ISO 80601-2-61:2011