



# NEW ESV-590



**A  
U  
T  
O  
M  
A  
T  
I  
C  
V  
E  
N  
T  
I  
L  
A  
T  
O  
R**



# NEW ESV-590

## AUTOMATIC VENTILATOR



**Cod. ESV-590**



- Intuitive design, easy to operate:  
12.1" TFT LCD touch screen with high-resolution.  
Detachable screen to be placed on pendant.
- Reduced possibility of cross-infection
- Dual options to set up ventilation mode:  
button or touch screen
- "Guide-way" style boot operation interface:  
in line with the ventilator operation works,  
effectiveness in preventing medical incident
- Reasonable layout, convenient to read and compare:  
waveforms, loops, and monitoring parameters in  
same colors, displayed in left  
side and right side correspondingly
- Safety guarantee:  
360-degree panoramic alert light, dual (sound and  
light) three-level alarms, accompanied with short  
text description of problem

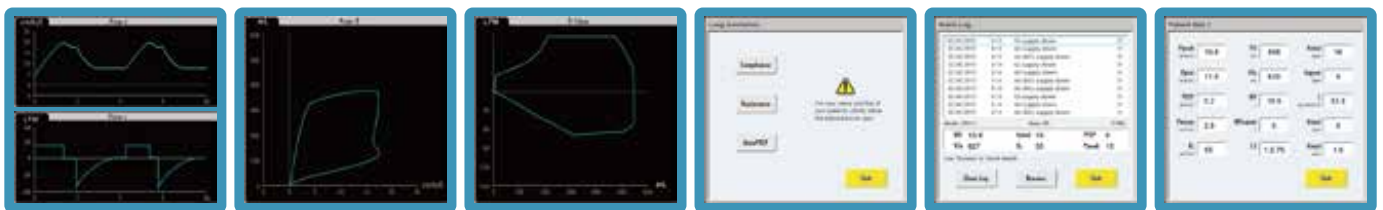


## Excellent Ventilation and Comfortable Respiration

- Meet demand of critical care mechanical ventilation: typical ventilation modes, Bi Level Ventilation (BIVENT), Pressure Regulation Volume Controlled (PRVC)
- Pneumatically driven and electronically controlled for pediatric and adult
- Sensitive pressure trigger and flow trigger options bring more comfort to patients

## Clinical Support

- Inspiratory and expiratory hold: maximum 15s, automatically transfer to inspiratory / expiratory ventilation mode and alert if timeout
- Smart aerobics, maximum 120s once time
- Artificial ventilation
- Synchronization atomization



## Advanced Medical Engineering Technology

- Initiative exhalation valve technology guarantees coordination and synchronization between user and machine
- Whole exhalation valve technology provide thermostatically controlled function, avoid vapor condensation, and effectively protect the ventilator
- Exhalation valve is easy to disassemble and convenient to disinfect in turn lows down infection rate
- Built-in inspiration flow sensor (non consumable design), low maintenance cost



## Specifications

- Volume Controlled (VCV), Assist/Control
- Pressure Controlled (PCV), Assist/Control
- Pressure Regulated Volume Control (PRVC), Assist/Control
- Synchronized Intermittent Mandatory Ventilation (SIMV)
  - Volume-controlled breaths (V-SIMV)
  - Pressure-controlled breaths (P-SIMV)
  - Pressure Regulated Volume Control- controlled breaths (PRVC-SIMV)
- **Bi Level Ventilation (BIVENT)**
- Spontaneous Ventilation (SPONT)
- Continuous Positive Airway Pressure (CPAP)
- Non Invasive/CPAP (NIV/CPAP)
- Non Invasive/Pressure Controlled Ventilation (NIV/PCV)
- Combined: VCV+SIGH, SIMV (VCV)+Pressure Support (PS), SIMV (PCV)+PS, SIMV (PRVC)+PS, BIVENT+PS, NIV/CPAP+PS, SPONT+PS

### Parameters

• Tidal volume:	20~2500ml
• Respiratory rate:	4~100bpm (used in VCV & PCV & PRVC) 1~40bpm (used in V-SIMV & P-SIMV & PRVC-SIMV)
• Inspiration time:	0.1~12s
• Inspiratory pause time:	0~4s
• FiO <sub>2</sub> :	21%~100%
• Trigger sensitivity:	Pressure (-2~0kPa, above PEEP) Flow (0.5~20LPM, with base flow)
• PEEP:	0~5kPa
• P <sub>support</sub> :	0~6kPa
• P <sub>control</sub> :	0.5~6kPa
• E-sense:	5%~80%
• Suction:	Maximum 2min
• Inspiratory hold:	Yes
• Expiratory hold:	Yes
• Manual inspiration:	Yes
• Waveform freeze:	Yes
• Nebulizer:	30 minutes
• Key lock:	Yes

### Monitoring

• Pressure values:	P <sub>plat</sub> , P <sub>peak</sub> , P <sub>mean</sub> , PEEP
• Volume/Flow values:	VT <sub>I</sub> , VT <sub>E</sub> , MV, MV <sub>spont</sub>
• Time values:	f <sub>total</sub> , f <sub>spont</sub> , I:E
• Oxygen monitoring:	O <sub>2</sub> sensor
• Real time curves:	Pressure-Time, Flow-Time, Volume-Time, Pressure-Volume loop, Flow-Volume loop
• Respiratory mechanics, dynamic and static compliance, resistance, auto PEEP	

### Alarm

- MV high, MV low, P<sub>aw</sub> high, P<sub>aw</sub> low, Peep High, Peep low, Airway pressure continue high, VT<sub>E</sub> low, VT<sub>E</sub> high, f<sub>spont</sub> high, T<sub>apnea</sub>, FiO<sub>2</sub> low, FiO<sub>2</sub> high, Power supply failure, Nebulizer on, Battery low, Battery exhausted, Air supply failure, O<sub>2</sub> supply failure, Air & O<sub>2</sub> supply failure, Fan Block, Pipe block, Circuit disconnected

## Technical data

• Screen:	12.1" TFT color touch screen (detachable)
• Gas supply:	O <sub>2</sub> , Air (All gas must be medical level), 0.28~0.6MPa
• Power supply:	AC110~240V, 50Hz-60Hz, 65VA
• Maximum security pressure:	≤8kPa
• Compliance:	≤4mL/100Pa
• Noise:	≤65dB (A)
• Communication interfaces:	RS232 port, VGA port, Nurse call
• Dimensions (H×W×D):	400×303×250 mm
• Weight:	15kg

## Environment requirements

• Temperature:	5°C~40°C (Operation) -20°C~55°C (Storage)
• Relative humidity:	≤90%, non-condensing (Operation) ≤93%, non-condensing (Storage)
• Atmospheric pressure:	50~106kPa (Operation) 50~106kPa (Storage)
• Altitude operation:	500~800mmHg / 3565~ -440m (Operation) 375~800mmHg / 5860~ -440m (Storage)



ESSE3 srl, Via Garibaldi 30  
14022 Castelnuovo D.B. (AT)  
Tel +39 011 99 27 706  
Fax +39 011 99 27 506  
e-mail [esse3@chierinet.it](mailto:esse3@chierinet.it)  
web: [www.esse3-medical.com](http://www.esse3-medical.com)

