



# ESV-640

Anesthesia machine



OPERATING THEATRE



## APPLICATION

The Anesthesia machine makes a good performance in Intensive Care Units (ICU), Operation room, Anesthesiology Department and other departments.

Professional design for adult, child and infant inhalation anesthesia and respiratory management, with advanced ventilation modes.

Outstanding ergonomic design, it ranks high level in safety, stability and convenience as well as user experiences.

This high-end model combine proven ventilation technology with the latest refinements in ergonomics and systems integration with an advanced, easy to use anesthesia table designed together with experienced experts to streamline your anesthesia workflow.

## FEATURES

- 10.4" TFT LCD screen displays the Ventilation parameters, Alarm information and Oscillogram.
- High precision flow meter, instantly know the fresh gas flow to your patient.
- Integrated breathing circuit design, ensure easy operating and keep tidy.
- Multiple working modes such as volume control and pressure limit, adapt to wide range patient.
- Vaporizer with temperature, pressure, flow compensation and self-lock function, keep safety anytime.
- Multiple parameters monitoring interface, make every parameter clear, let users know the patient conditions in all aspects.
- Pressure-time, low-time loop Oscillogram and high precision ETCO<sub>2</sub>, O<sub>2</sub> concentration show in real time.
- Vital sign monitor and anesthetic gas monitor are optional.
- ETCO<sub>2</sub> module and Anesthesia Gas Scavenging System (AGSS) are optional.

## SAFETY

- Three level alarm system, visual and sound alarm information.
- With multiple type of alarm, reminder and protection functions.
- Advanced power management control technology.
- Built-in backup battery provide the emergency power supply to the unit.
- Low O<sub>2</sub> pressure alarm and N<sub>2</sub>O cut-off protection.

## TRUST POINT

Simplicity: 4 static casters with self-locking function.

Precision in an anesthesia ventilator with multiple ventilation modes: IPPV, A/C, PCV, SIMV, SIGH and MANUAL.

Flexible configurations able to customize your requirements.

International standard and advanced technology suitable for wide range use.

Compact interface and big screen give you better operating experience.



*Breathing circuit*



*APL Valve*



*Breathing tube*



## TECHNICAL SPECIFICATION

Ventilation mode: IPPV, A/C, SIMV, SIGH, MANUAL

Flow meter: O<sub>2</sub> (0.1 ~ 10 L/min) - N<sub>2</sub>O (0.1 ~ 10 L/min) - AIR (0.1 ~ 10 L/min)  
 Rapid oxygen supply: 25 L/min ~ 75 L/min  
 Tidal volume (Vt): 0, 20 mL ~ 1500 mL  
 Frequency (Freq): 1 /min ~ 100 /min  
 I:E: 4: 1 ~ 1: 8  
 PEEP: 0 cmH<sub>2</sub>O ~ 30 cmH<sub>2</sub>O  
 Pressure triggering sensitivity (Ptr): -20 cmH<sub>2</sub>O ~ 0 cmH<sub>2</sub>O (Based on PEEP)  
 Flow trigger sensitivity (FTr): 0.5 L/min ~ 30 L/min  
 Pressure control (PC): 5 cmH<sub>2</sub>O ~ 60 cmH<sub>2</sub>O  
 SIGH: 0 (off) 1/100 ~ 5/100  
 Apnea Ventilation: OFF, 5 s ~ 60 s  
 Pressure limit: 20 cmH<sub>2</sub>O ~ 100 cmH<sub>2</sub>O

### Monitoring parameter

Frequency (Freq): 0 /min ~ 100 /min  
 Tidal volume (Vt): 0 mL ~ 2000 mL  
 MV: 0 L/min ~ 100 L/min  
 Oxygen concentration: 15 % ~ 100 %

### Oscillogram

P-T (pressure – time)  
 F-T (flow - time)  
 V-T (volume - time)

### Alarm and protection

The AC power failure alarm:	Power failure or no connection
Low voltage alarm for battery backup:	< 11.3 ± 0.3 V
No tidal volume:	≤ 5 mL within 6 s
High oxygen concentration alarm:	19% ~ 100%
Low oxygen concentration alarm:	18% ~ 99%
High Airway pressure alarm:	20 cmH <sub>2</sub> O ~ 100 cmH <sub>2</sub> O
Low Airway pressure alarm:	0 cmH <sub>2</sub> O ~ 20 cmH <sub>2</sub> O
High Minute Volume alarm:	Adult (5 L/min ~ 20 L/min) - Pediatric (1 L/min ~ 15 L/min,
Low Minute Volume alarm:	0 ~ 10 L/min
Continuous Pressure alarm:	(PEEP+1.5 kPa) over 16s
Suffocation warning:	5 s ~ 60 s no spontaneous ventilation
The maximum limited pressure:	<12.5 kPa
Fan error:	Show on screen
Oxygen deficit:	Show on screen

### Working condition

Gas source: O<sub>2</sub>, N<sub>2</sub>O, Air  
 Pressure: 280 kPa ~ 600 kPa  
 Voltage: 100 ~ 240 V  
 Power frequency: 50/60 Hz

### Packing size

Wooden case packing size: L 920 \* W 970 \* H 1380 mm - G.W.: 156 kg  
 CBM: 1.23 m<sup>3</sup>  
 Anesthesia machine N.W.: 102 KGS



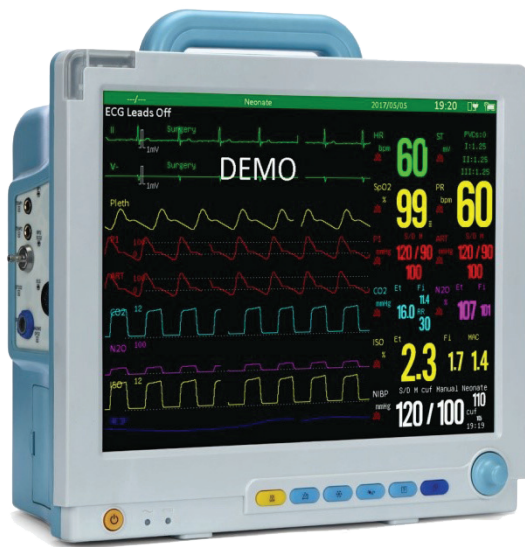
Flowmeter



Pressure gauge



**ANESTHETIC MONITOR OPTIONAL**



**AG5S**

**Technical Specification:**

- Sample Rate: 50mL/min, ±10mL/min
- Operation method: Non-dispersive infrared(NDIR), no moving parts
- Initialization Time: 20 sec, full specification within 60 sec
- Calibration: No routine user calibration required
- Compensation: Automatic for atmospheric pressure, temperature
- Rise Time: Co2<200ms, N2O, AA<350ms
- Respiratory Rate: Range 3~150BMP Accuracy±1BMP
- Breath Detect: Adaptive threshold, minimum 1% 2 value change
- Agent Threshold Agent: 0.15%
- Gases Accuracy:
  - Co2: 0-10% ±(0.2 vol% +2% of reading)
  - 10-15% ±(0.3 vol% +2% of reading)
  - N2O: 0-100% ±(2 vol% +2% of reading)
  - ISO: 0-6% ±(0.2 vol% +2% of reading)
  - ENF: 0-6% ±(0.2 vol% +2% of reading)
  - SEV : 0-8% ±(0.2 vol% +2% of reading)
- Temperature & Humidity:
  - Operating: 0°C to 40°C, 10 to 90%RH, no-condensing

**VAPORIZER**



**Optional**



**Optional**



**Included**



**Included**



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