

# EMV+<sup>®</sup> 731 SERIES

One compact device  
for all missions



## Technical Specifications

The EMV+<sup>®</sup> 731 Series ventilator is a rugged, lightweight, portable ventilator designed to meet military and civilian transport standards. Built for challenging military operational environments, the EMV+ 731 Series ventilator utilizes ambient air and low-flow oxygen supplies and enables use of CBRN filters to combat contamination.

### EMV+ 731 Series Ventilator Features:

- AC, SIMV, CPAP, and bi-level ventilation modes: volume- and pressure-controlled
- An energy-efficient, integrated, high-flow compressor
- An unprecedented 10-hour battery runtime and multisource power system
- Fully reflective LCD and Silent and Dark mode capabilities for operation in all light conditions and tactical situations
- Altitude compensation from -2,000 to 25,000 feet (-610 to 7620 meters)
- High- and Low-Flow oxygen source including the use of portable Oxygen Concentrators
- Plateau Pressure measurement
- Supports Inverse I:E Ratio Settings
- Smart Help<sup>™</sup> Support during operation in case of alarms

### Military Airworthiness Equipment

The EMV+ 731 Series is Airworthiness Release certified and approved for use during all phases of flight aboard U.S. Air Force and Army aircraft. ZOLL has experience designing Military Airworthiness Equipment as well as a history of collaborating with militaries to design needs-based military solutions. Collaborative, customer-driven product development is at the center of ZOLL's core competency: Providing reliable, evidence-based technologies that improve clinical outcomes.



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# ZOLL<sup>®</sup>

## Portable Ventilator

### Full Patient Range

For patients from infant ( $\geq 5$  kg) through adult

### Smart Help™ Display

Guides operator through on-screen commands when responding to alarms.

### Versatility with Standard Military Equipment

Functions with deployed oxygen concentrator systems used by the military.

### Unprecedented Battery Run-Time

No additional battery backup needed thanks to 10-hour battery run-time. Battery recharges to 90% in 2 hours.

### AWR Certified

Airworthiness Release certified. Approved for use during all phases of flight aboard both fixed-wing and rotary-wing U.S. Air Force and Army aircraft.

### Silent and Dark Mode

Can be switched to a silent and dark mode, preventing it from interfering with advanced infrared night-vision equipment.

### Rugged, All-Weather Device

Designed for the unique needs of the military to handle austere environments. Meets an unprecedented set of military standards.

## EMV+® 731 Series Specifications

### Clinical Specifications

**Operating Modes:** AC, SIMV, CPAP, BL

**Breath Target:** Volume and pressure

**Special Functions:** Plateau Pressure, Manual Breath, Apnea Backup, Oxygen in Use, Inverse Ratio  
**Flow Rate:** 0 to 100 LPM @ 40 cm H<sub>2</sub>O

**Breath Rate:** 1 to 80 BPM

**Tidal Volume:** 50 to 2000 ml ATPD  $\pm$  10% of setting

**Inspiratory Time:** 0.3 to 5.0 seconds

**I:E Ratio:** 1:99 to 4.0:1.0

**FiO<sub>2</sub>:** 21 to 100%  $\pm$  3% of full scale  $\pm$  10% of setting

**PEEP:** 0 to 30 cm H<sub>2</sub>O

**Pressure Support:** 0 to 60 cm H<sub>2</sub>O

**Peak Inspiratory Pressure (PIP):** 10 to 80 cm H<sub>2</sub>O

**Trigger Sensitivity:** -0.5 to -6.0 cm H<sub>2</sub>O

**Oxygen Input Pressure:** 55 psig (-25%; +20%) (380 kPa)

### Safety Specifications

**Airway Pressure High Limit:** 20 to 100 cm H<sub>2</sub>O values

**Airway Pressure Low Limit:** Off, 3 to 35 cm H<sub>2</sub>O

**BPM High Alarm Limit:** Off, 2 to 99

**BPM Low Alarm Limit:** 2 to 40

**LED Status/Alarm Indicator:** Red, yellow, and green LCD/LED adjustable

### Environmental

**Operating Voltages:**

100 to 240 VAC (50/60 and 400 Hz) or 11.8 to 30.3 VDC

**Operating Time:** Internal battery 10 hours

**Temperature Ranges:**

**Operating:** -26° to 55°C (-14 to 131°F) without charging  
<0° and >49°C

**Battery Charging:** 0° to 45°C (32° to 113°F)

**Long-Term Storage:**

-15° to 21°C (5° to 71°F)  
Optimal storage conditions

**Altitude Compensation:** Automatic -2,000 to 25,000 ft. (-601 to 7,620 meters)

**AWR Certified:** Approved for most U.S. Military aircraft

**Temperature and Humidity Testing:** MIL STD 810F

**Ingress Testing:** MIL STD 810 F

**Shock and Vibration Testing:** MIL STD 810F

**Altitude Testing:** MIL STD 810F

**EMC Testing:** MIL STD 461F

**Military Vehicle Power:** MIL STD 1275 F

### General

**Size:** 8.0" wide x 12.5" high x 4.5" deep (20.3 cm wide x 31.8 cm high x 11.4 cm deep)

**Weight:** 9.7 lbs (4.4 kg)



### ZOLL Medical Corporation

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