



Technical Specifications

The EMV+[®] 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™ 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.

Portable Ventilator

Full Patient Range

For patients from infant (≥ 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.

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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 H₂O

Breath Rate: 1 to 80 BPM

Tidal Volume: 50 to 2000 ml ATPD ± 10% of setting

Inspiratory Time: 0.3 to 5.0 seconds

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

FiO₂: 21 to 100% ± 3% of full scale ± 10% of setting

PEEP: 0 to 30 cm H₂O

Pressure Support: 0 to 60 cm H₂O

Peak Inspiratory Pressure (PIP): 10 to 80 cm H₂O

Trigger Sensitivity: -0.5 to -6.0 cm H₂O

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

Safety Specifications

Airway Pressure High Limit: 20 to 100 cm H₂O values

Airway Pressure Low Limit: Off, 3 to 35 cm H₂O

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)

