

Z Vent™

ZOLL®



VENTILATION SIMPLIFIED™

# A PORTABLE VENTILATOR FOR

Z Vent is the ideal transport ventilator designed for both pre-hospital and intra-hospital use. Z Vent offers unmatched durability and portability, delivering a full range of ventilation options in a device that's simple to use.



# EMS AND HOSPITAL

## EASY TO USE – READY WHEN YOU ARE

Z Vent removes the complexity associated with many portable ventilators. Our Smart Help™ technology enables users to quickly resolve an alarm with simple on-screen prompts, a feature only available on ZOLL ventilators, while a Touch, Turn, and Confirm interface makes changing settings quick and easy.

In non-invasive ventilation modes, Z Vent's Apnea Backup feature automatically ventilates patients when spontaneous breathing ceases, while Automatic Leak Compensation adjusts oxygen flow if a mask is ill-fitting.

## PORTABLE – GOES ANYWHERE YOU GO

Weighing just 9.7 pounds (4.4 kg), Z Vent is light and easy to carry. Its internal compressor consumes less than half of the oxygen of many transport ventilators.<sup>1</sup> And with a 10-hour battery, Z Vent ensures you can continue to provide care, even during long transports.

## RUGGED – BEYOND MILITARY STANDARDS

Designed to surpass high military standards, Z Vent is resistant to dust, dirt, jetting water, and challenging weather elements. It has a temperature range of  $-13^{\circ}\text{F}$  to  $120^{\circ}\text{F}$  ( $-25^{\circ}\text{C}$  to  $+49^{\circ}\text{C}$ ) and is proven to withstand a drop from over 1 meter, which allows it to operate at conditions that many hospital or home ventilators are not rated to endure.

## HIGH-QUALITY VENTILATION IN THE MRI SUITE

Many transport ventilators are not designed for use in the MRI. With Z Vent, you can continue to provide high-quality ventilation from the ICU to the MRI Suite without sacrificing your level of treatment to the patient.

<sup>1</sup> [www.ccforum.biomedcentral.com/articles/10.1186/cc4410](http://www.ccforum.biomedcentral.com/articles/10.1186/cc4410). Accessed 7 Dec. 2017.





## A STANDARD FOR EMS

Like everything else medics carry, ventilators must stand up to the tough physical demands of the EMS environment. With enhanced durability, Z Vent sets the standard for ruggedness.

Parameter	Z Vent Rating
Operation Temperature Range	-25° to 49° Celsius (-13° to 120° Fahrenheit)
Ingress Protection—Extreme Dust	Surpasses Mil Standard 810F (Test Method 510.4, Procedure 1)
Ingress Protection—Extreme Rain	Surpasses Mil Standard 810F (Test Method 506.4, Procedure 1)
Crash Testing	20g
Drop Testing (with carry case)	26 drops from 120 centimeters (48 inches) on all surfaces.

# VENTILATION SIMPLIFIED™



**EASY TO USE**



**PORTABLE**



**DURABLE**



## Z VENT — VENTILATION SIMPLIFIED™

### DESIGNED WITH YOUR BUDGET IN MIND

The economical Z Vent can lower your costs from the use of disposable CPAP sets, even when you provide treatments only a few times per week. Z Vent is a valuable solution that can upgrade your airway management to BL mode for enhanced patient comfort.

## ZOLL MEDICAL CORPORATION

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# ZOLL®

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VENTILATION SIMPLIFIED™

## Ready for the Streets

### Full Patient Range

For patients from infant (> 5 kg BW) through adult

### Light, Rugged, All-weather Device

Under 10 pounds (4.4 kg) yet rugged

### Smart Help™ Feature

Guides operator through on-screen prompts, when responding to alarms

### Intuitive Design

User-friendly, straight-forward interface

### Unprecedented Battery Runtime

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

### AWR Certified

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

### MRI Conditional\*

Specially designed to meet the challenging requirements for patients who require magnetic resonance imaging (MRI)

### ZOLL Medical Corporation Worldwide Headquarters

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## Z Vent® Specifications

### Clinical Specifications

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

**Breath Target:** Volume and pressure

**Special Functions:** Plateau Pressure\*, Manual Breath, Apnea Back Up, Oxygen in Use, Inverse Ratio\*

**Flow Rate:** 0 to 100 LPM @40 H<sub>2</sub>O

**Breath Rate:** 0 to 80 BPM

**Tidal Volume:** 50 to 2000 ml ATPD +/- 10% of setting

**Inspiratory Time:** 0.1 to 5.0 seconds

**I:E Ratio:** 1:99 to 4:1

**FiO<sub>2</sub>:** 21 to 100% +/- 3% of full scale +/- 10% of setting

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

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

**Trigger Sensitivity:** -6.0 cm to -0.5 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 Hz and 400 Hz) or 12.5 to 28.0 VDC

**Operating Time:** Internal battery 10 hours

### Temperature Ranges:

**Operating:** -26° to 55°C (-14 to 131°F) with battery charging, battery discharge and AC power operation

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

**Long-term Storage:** -46° to 71°C (-50.8° to 159°F) Optimal storage conditions

### Ambulance:

- DIN-EN 1789

### Airworthiness

- RTCA/DO-160G

**Altitude Compensation:** -2,250 to 25,000 ft. (-685 to 7,620 meters)

### Temperature and Humidity

**Testing:** MIL STD 810F

**Ingress Testing:** MIL STD 810 F

**Shock and Vibration Testing:** MIL SRD 810G

**Vibration Testing:** IEC 60068-2-6, ICE 60068-2-34, IEC 60068-2-36, IEC 60068-2-64

**Shock Testing:** IEC 60068-2-27

**Altitude Testing:** MIL STD 810F

**EMC Testing:** MIL STD 461F

**Ingress Protection:** IP54 (Dust protected and splash-proof)

### General

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

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

\*optional

