

ZOLL SERIES M



ABOUT

The **Zoll M Series defibrillator** integrates advanced patient monitoring, noninvasive pacing, ECG display, and defibrillation, along with printing and recording capabilities, all in one device. This defibrillator is suitable for use in various resuscitation situations within hospitals or EMS settings. It can be configured to operate in manual, advisory, or semi-automatic modes. The Zoll M Series Defibrillator is compatible with CPR-D-pads, enabling the Real CPR Help feature, which provides feedback to the rescuer during CPR. Additionally, PCMCIA cards can be installed to record ECG, voice, and other system data, allowing for review and archiving on a computer. The Zoll M Series Defibrillator is the predecessor to the M Series CCT version of the Zoll Defibrillator.



FEATURES

- Advanced defibrillation and monitoring in one system.
- Configurable for manual, advisory, or semi-automated operation.
- Compatible with CPR-D-pads and Real CPR Help.
- PCMCIA cards allow recording of ECG, voice, and system data for review and archiving.
- Delivers up to 360 joules (or 200 joules on biphasic units) for effective defibrillation.
- External pacing.
- Vital signs trending: Monitors heart rate, SpO₂, EtCO₂, respiration, and NIBP.
- Supports 3-, 5-, or 12-lead ECG analysis for versatile patient assessment.



SPECIFICATIONS



DIMENSIONS

Height: 6.8" (17.3 cm)
Width: 10.3" (26.2 cm)
Depth: 8.2" (20.8 cm)
Weight: 13.5 lb (6.14 kg)

POWER

AC Power: 100-120 ~ 50/60 Hz, 220-240 ~ 50 Hz,
220 VA
DC Input (Optional): 10-29 V, 130 W

BATTERY (PD 4410)

Type: Rechargeable, Sealed Lead Acid
Weight: 2.2 lbs (1 kg)
Voltage: 2V/cell; 5 cells wired in series
Recharge Time: 4 hours or less with an integral
charger
Operating Time: For a new, fully charged battery
pack at 20 °C: 35 defibrillator discharges at maximum
energy (360 J), or 2.75 hours of continuous ECG
monitoring, or 2.25 hours of continuous ECG
monitoring/pacing at 60 mA, 80 beats/min.

CPR MONITORING

Compression Depth: 0.75 to 3 inches ± 0.25 inches
(1.9 to 7.6 cm ± 0.6 cm)
Compression Rate: 50 to 150 compressions per
minute

BATTERY (XL BATTERY)

Type: Rechargeable, Sealed Lead Acid
Weight: 3.7 lbs (1.7 kg)
Voltage: 2V/cell; 5 cells wired in series
Recharge Time: 7.2 hours or less with an integral
charger
Operating Time: For a new, fully charged battery
pack at 20 °C: 60 defibrillator discharges at
maximum energy (360 J), or 4 hours of continuous
ECG monitoring, or 3.25 hours of continuous ECG
monitoring/pacing at 60 mA, 80 beats/min.

PACEMAKER

Type: VVI demand; asynchronous (fixed rate) when
used without ECG leads or in ASYNC pacing mode.
Pulse Type: Rectilinear, constant current.
Pulse Shape and Duration: Rectilinear, 40
milliseconds ± 2 milliseconds
Pulse Amplitude: Variable 0 mA to 140 mA $\pm 5\%$ or 5
mA, whichever is greater. Digitally displayed on the
monitor (increments or decrements by a value of 2
mA).
Pacing Rate: Variable from 30 ppm to 180 ppm $\pm 1.5\%$
(increments or decrements by a value of 2 ppm).
Output protection: Fully defibrillator protected and
isolated
Multi-Function Electrode (MFE) Pads: Specifically
designed adult anterior-posterior pre-gelled ZOLL
MFE Pads, and Multi-Function Stat-pads packaged in
pairs.

SPECIFICATIONS



DEFIBRILLATOR

Waveform: Dampened sinusoid.

Patient Impedance Range: Minimum: 15 ohms;
Maximum: 250 ohms; Internal paddle range: 7 - 250 ohms

Synchronized Mode: Synchronizes the defibrillator pulse to the patient's R-wave. 60ms maximum time delay between sync pulse and delivery of energy.

Paddles: Standard anterior/posterior adult and pediatric. Adult paddles slide off to expose pediatric paddles.

Defibrillation Advisory: Evaluate electrode connections and the patient's ECG to determine whether defibrillation is required.

Multi-Function Electrode Impedance Measurement Accuracy: 0 ohms - 250 ohms $\pm 10\%$ or 5 ohms, whichever is greater.

ECG MONITORING

Patient Connection: 3, 5, or 12-lead ECG cables, paddles, or MFE Pads.

ECG Size: 0.5, 1, 1.5, 2, 3 cm/mV - display on monitor

Heart Rate Range: 30 - 300 bpm

Heart Rate Accuracy: $\pm 5\%$

Input Protection: Fully defibrillator protected. A special circuit prevents the pacer pulse from distorting the ECG.

Vital Signs Trends: Heart rate, SpO₂, end-tidal CO₂, respiration rate, and noninvasive systolic, diastolic, and mean blood pressure values.

DISPLAY

Screen Type: High resolution, electroluminescent, or liquid crystal display (LCD)

Screen Size: 5.66 inches (14.4 cm) diagonally (EL Display)

Sweep Speed: 25 mm/sec, 50 mm/sec (configurable for 12-lead ECG recording)

Viewing Time: 4 seconds

RECORDER

Paper: 80 mm thermal (grid width) 90 mm (paper width)

Speed: 25 mm/sec (configurable for 12-lead ECG printing at 50 mm/sec)

Delay: 6 seconds

Printing Method: High-resolution thermal-array printhead.

Print-out Modes: Manual or automatic — user-configurable.

On/Off Control: Front panel and paddle.

Automatic Function: 15-second recording initiated by alarm activation or defibrillator discharge

PCMCIA CARD

Capacity: Standard series II flash card - 1 megabyte to 16 megabytes

Audio Recording: Digital compressed audio data