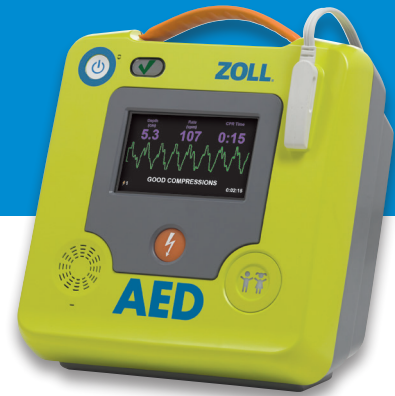# ZOLL AED 3™ BLS

Technical Specifications

Enhanced Real CPR Help®

The ZOLL AED 3 BLS provides enhanced Real CPR Help®, which measures the actual depth and rate of each compression and displays it numerically on the CPR Dashboard™ feature. The CPR Dashboard also shows elapsed time, CPR cycle countdown, shocks delivered, and ECG. The Real CPR Help integrated, real-time CPR feedback tells and shows rescuers when they are administering high-quality CPR.

RapidShock™ Analysis

The ZOLL AED 3 BLS with RapidShock™ analysis enables the shortest rhythm analysis for more continuous care and potentially life-saving CPR. Minimising the pre-shock pause, and providing more CPR, can improve patient outcomes.* Research shows that minimising time to shock after the CPR cycle ends may improve survival.[1] The 2015 ERC Guidelines note, "The delay between stopping chest compressions and delivery of the shock (the pre-shock pause) must be kept to an absolute minimum; any delay will reduce the chances of the shock being successful."[2]

Integrated Paediatric Rescue

Paediatric rescue is made easier with ZOLL's unique CPR Uni-padz™ electrodes and a child mode setting. Universal pad design provides rescuers a single, confident solution to treat both adult and paediatric victims of SCA by using the same set of electrode pads and simply activating child mode. The CPR Dashboard displays numerical CPR depth, rate, and cycle time for additional guidance to the rescuer.

Low Total Cost of Ownership

Longer-lasting, 5-year battery and universal electrode pads reduce AED device maintenance requirements and cost. Less maintenance, and only requiring one set of pads for adults and children, can improve readiness and have the added benefit of reducing the total cost of ownership.

Wi-Fi and USB Connectivity

The 2015 ERC Guidelines state that "Data-driven performance-focused debriefing has been shown to improve performance of resuscitation teams. We highly recommend their use for teams managing patients in cardiac arrest."[3] Using ZOLL Online CaseReview™, detailed rescue performance data can be exported quickly and easily via USB or transferred directly over Wi-Fi. Data on CPR rate, depth, release velocity, and compression fraction can easily be evaluated and used to improve future responder performance. ZOLL's connectivity also enables fast and easy distribution of event and ECG data to medical personnel.

*On the ZOLL AED 3 Automatic, the pre-shock pause time is 5 seconds longer due to a warning to stand clear of patient and countdown before shock delivery.

[1]Snyder DE, et al. Crit Care Med. 2004;32(9) Supplement:S421-S424.
[2]ERC Guidelines for Resuscitation 2015. Resuscitation. 2015;95:20.
[3]ERC Guidelines for Resuscitation 2015. 2015;95:288-301.

ZOLL®

ZOLL's CPR Dashboard™ provides real-time numerical feedback on CPR depth, rate, and cycle time.

ZOLL's RapidShock™ Analysis provides heart rhythm analysis in as little as 3 seconds for more continuous CPR.

Activate Child Mode to invoke the paediatric heart analysis algorithm and reduce energy delivered.

Wi-Fi and USB Connectivity enable quick and easy access to event data.

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ZOLL AED 3 BLS Specifications

Defibrillator

Protocol: Semiautomatic

Waveform: ZOLL Rectilinear Biphasic™

Defibrillator Charge Hold Time: 30 seconds

Energy Selection: Factory preprogrammed selection (Adult: 120 J, 150 J, 200 J; Child: 50 J, 70 J, 85 J). User configurable.

Patient Safety: All patient connections are electrically isolated

Charge Time: Less than 10 seconds with new battery

Pre-shock Pause: Less than 5 seconds with new battery

Electrodes: ZOLL CPR Uni-padz™

Self-test: User-configurable automatic self-test every day or every 7 days. Default: Every 7 days. Monthly full-energy test (200 J).

Automatic Self-test Checks: Battery capacity, status and expiry; electrode connection and expiry; ECG and charge/discharge circuits; microprocessor hardware and software; CPR circuitry and pads sensor; audio circuitry

CPR Metronome Rate: Constant 105 (+/- 2) CPM

Depth Measurement: 1.9 cm to 10.2 cm; 0.75 in to 4 in

Defibrillation Advisory: Evaluates electrode connection and patient ECG to determine if defibrillation is required

Shockable Rhythms: Ventricular fibrillation with average amplitude >100 microvolts and wide complex ventricular tachycardia with rates greater than 150 BPM for adults, 200 BPM for paediatrics. For ECG analysis algorithm sensitivity and specificity, refer to the ZOLL AED 3 Administrator's Guide.

Patient Impedance Measurement Range: 10 to 300 ohms

Defibrillator: Protected ECG circuitry

Display Format: High-resolution LCD with capacitive touch panel

Display Screen Size: 5.39 cm x 9.5 cm; 2.12 in x 3.74 in

Display Sweep Speed: 25 mm/sec

Display Viewing Speed: 3.84 seconds

Data Recording and Storage: User-configurable for 1 or 2 clinical events for total of 120 minutes. Includes ECG, impedance measurements, device prompts, and CPR data. With voice recording enabled, same data with synchronous audio added for total of 60 minutes.

Data Recovery: Controlled by touchscreen, uploaded to USB memory stick, or RescueNet® CaseReview, over a Wi-Fi network

Internal Clock Synchronisation: Coordinated Universal Time (UTC) synchronisation occurs when communicating with the ZOLL Online server.

Device

Size: (H x W x D) 12.7 cm x 23.6 cm x 24.7 cm; 5.0 in x 9.3 in x 9.7 in

Weight: 2.5 kg; 5.5 lbs

Power: Lithium manganese dioxide battery pack

Wireless: 802.11 a/b/g/n

Security Protocols: WPA1, WPA 2, WPA Personal, WPA Enterprise

Port: USB 2.0

Audio Recording: User-configurable on/off (default=off)

Device Classification: Class II and internally powered per EN 60601-1

Design Standards: Meets applicable requirements of EN 60601-1, EN 60601-1-11, IEC 60601-2-4

Environmental

Operating Temperature: 0° to 50°C; 32° to 122°F

Storage Temperature: -30° to 70°C; -22° to 158°F

Humidity: 10% to 95% relative humidity, non-condensing

Vibration: IEC 60068-2-64, Random, Spectrum A.4, Table A.8, Cat. 3b; RTCA/DO-160G, Fixed Wing Aircraft, Section 8.6, Test Cat. H, Aircraft Zone 1 and 2 ; EN1789, Sweep per EN 60068-2-6 Test Fc

Shock: IEC 60068-2-27; 100G

Altitude: -381 m to 4573 m; 1,250 to 15,000 ft

Particle and Water Ingress: IP55

Drop Test: 1 meter; 3.28 ft

Battery

Battery Capacity: Typical new battery running at an ambient temperature of +20° C to +25° C (68° F to 77° F) can provide: 140 defibrillator discharges at maximum energy (200 joules), or 6 hours of continuous monitoring (with 2-minute CPR periods) Note: CPR periods shorter than 2 minutes can decrease the operating time that can be obtained from a new battery.

Type: Disposable, sealed lithium manganese dioxide

Battery Standby Life (once installed): 5 years with weekly self-test. Battery end of life indicated by blank status window (typical remaining shocks: 9).

Battery Shelf Life: Store for up to 2 years at 23°C (77°F) prior to installing in ZOLL AED 3 BLS to maintain battery life detailed above.

Temperature: 0°C to 50°C (32°F to 122°F)

Humidity: 10% to 95% (non-condensing)

Weight: 317.5 grams; 0.7 lbs

Size: (H x W x D) 27.75 mm x 133 mm x 88 mm; 1.0 in x 5.16 in x 3.5 in

Nominal Voltage: 12 volts

CPR Uni-padz

Shelf Life: 5 years

Conductive Gel: Polymer Hydrogel

Conductive Element: Tin

Packaging: Multilayer foil laminate pouch

Impedance Class: Low

Cable Length: 142 (+/-3.8) cm; 56 (+/- 1.5) in

Design Standards: Meets requirements of IEC 60601-2-4

ZOLL AED 3 BLS Carry Bag

Size: (H x W x D) 29.2 cm x 27.4 cm x 17.8 cm; 11.5 in x 10.8 in x 7.0 in

Weight: 3.4 kg; 7.5 lbs (ZOLL AED 3 BLS with battery installed and CPR Uni-padz pre-connected in carry bag)

Holds: ZOLL AED 3 BLS with battery inserted and back-up set of CPR Uni-padz

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