

# ZOLL PD™ 1400 PACEMAKER/DEFIBRILLATOR

## Compact, Light, Ultra-Rugged

The ZOLL PD 1400 has a space-saving design and weighs just 13 pounds (5.9kg) when configured with Multi-Function Electrodes (15 pounds (6.8kg) with defibrillation paddles). Water resistant and rugged, it's designed for demanding transport use and will provide years of reliable operation in the most exacting emergency conditions - either inside or outside the hospital.

## Large Monitor

Despite its space-saving design, the ZOLL PD 1400 has a large, bright, high contrast CRT display. Messages are large and easy to read, even in bright sunlight.

## Multi-Function Electrodes

ZOLL's Multi-Function Electrodes allow hands-off defibrillation, pacing, and monitoring. Just one pair of electrodes and one simple connection is all that is required to perform four functions: defibrillation, pacing, cardioversion and ECG monitoring. ZOLL Multi-Function Electrodes are faster, safer, and more effective than standard paddles.

## Ease of Use

The controls are simple and color-coded for easy operation. All functions and controls are standardized with other ZOLL models. Training time is reduced, skill retention is improved, and potential therapy delays are minimized.



**T**he ZOLL PD 1400 is the smallest, lightest, and most advanced pacemaker/defibrillator in the world. It offers a full range of features in one compact, ultra-rugged, and water resistant unit that weighs just 13 pounds (5.9kg), making it ideal for both pre-hospital and in-hospital transport use. It can be operated either with ZOLL "hands-off" Multi-Function Electrodes or with standard defibrillation paddles and pacing electrodes.

The ZOLL PD 1400 is designed for ease of use, maximum flexibility, and complete compatibility with other models in the integrated ZOLL system. Never before has so much capability been available from so small and portable a unit.

## Pacing Technology

The ZOLL PD 1400 features ZOLL's patented pacing technology, recognized as the industry standard and proven superior in independent clinical studies.\*

## Option Module Connector

Option modules, providing upgrade capabilities, can be added through the option module connector. This connector is standard on every ZOLL PD 1400, providing maximum flexibility and long-term value.

## Superior Battery Technology

Sealed, lead-acid battery technology provides high capacity, long life, and low cost. Continuous AC operation, 4 hour recharge and typically 3.5 hours of portable operation with PowerCharger, combined with a separate 4-battery compartment charger, make this the most versatile and advanced battery operated device.

## Annotating Recorder

Automatic recorder provides accurate written documentation of therapies. Summary function automatically stores a record of ECG and therapies delivered for later recall and review.

## Warranty and Support

Comprehensive warranty, extensive on-site training, and around-the-clock technical assistance are included with every ZOLL PD 1400.

\*Clinical studies are available upon request.

# ZOLL PD™ 1400

# SPECIFICATIONS

## Pacemaker

Type:	VVI demand; asynchronous (fixed rate) when used without ECG leads.
Pulse Type:	Rectilinear, constant current.
Pulse Duration:	40 milliseconds.
Pulse Amplitude:	Variable to 140 mA.
Pacing Rate:	Variable from 30 to 180 PPM.
Output Protection:	Fully defibrillator-protected and isolated.
Pacer On:	Message display on monitor.

## Pacing/Defibrillation Electrodes

Specially designed pre-gelled ZOLL Multi-Function Electrodes, and Multi-Function *stat•padz* electrodes packaged in pairs. Can be used in the anterior/anterior position. Pediatric sizes available.

## Defibrillator

Waveform:	Damped sinusoid.
Output Energy Delivered:	Selectable at 2, 3, 5, 7, 10, 20, 30, 50, 100, 150, 200, 300, 360 joules.
Energy Selection:	Control on sternum paddle and front panel.
Charge Time:	Less than 10 seconds.
Delivered Energy Display:	CRT monitor displays delivered energy.
Synchronized Mode:	Synchronizes defibrillator pulse to patient's R-wave. "SYNC" message displayed on monitor. Marker on monitor and on recorder paper identifies R-wave.
Charge Controls:	Control on apex paddle and on front panel.
Paddles:	Standard paddles are anterior/anterior adult and pediatric. Adult paddles slide off to expose pediatric paddles.
Defibrillation Electrodes:	Specifically designed pre-gelled ZOLL Multi-Function Electrodes used in anterior/anterior or anterior/posterior positions; packaged in pairs.
Integral Defibrillator Tester:	Integral circuitry allows complete test of defibrillator charge and discharge without removing paddles from storage wells. Identical circuitry allows complete test of unit configured with multi-function cable.
Defib On:	Message display on monitor.

## Monitor and Display

Patient Connection:	Via 3-lead ECG cable, paddles, and electrodes. Selectable by front panel switch.
Input Protection:	Fully defibrillator-protected. Special circuit prevents distortion of ECG by pacer pulse.
Electrical Isolation and Shielding:	Input protected against high-voltage defibrillator pulses and typical radio frequency interference.
Bandwidth:	.5 – 35 Hz (–3dB) standard.

Display Format:	Nonfade, moving trace.
Monitor On:	Message display on monitor.
Screen Type:	High-resolution CRT display.
Screen Size:	4.5 inches diagonally (56 mm x 86 mm, viewing area).
Sweep Speed:	25 mm/sec.
Viewing Time:	3.4 seconds.
Heart Rate:	Digital display on monitor 0 – 300 BPM.
Pacer Output Current:	Digital display on monitor 0 – 140 mA.
ECG Lead Selection:	Display on monitor.
ECG Size:	.5, 1, 1.5, 2, 3 cm/mV display on monitor.
Alarm On/Off Status:	Display on monitor. User selectable High (60 – 280 BPM) Low (20 – 100 BPM).
ECG Lead Off:	Message display on monitor.
Pacer Electrode Off:	Message display on monitor.
Defibrillator Paddle Fault:	Message display on monitor.
Defibrillator Electrode Fault:	Message display on monitor.
Recorder Paper Out:	Message display on monitor.
Low Battery Voltage:	Message display on monitor.

Paper:	Standard 40 mm thermal (grid width), 50 mm (paper width).
Speed:	25 mm/sec.
Delay:	4 seconds.
Annotations:	Time, date, defib energy, heart rate, pacer output, sync, ECG size, lead, alarm, defib test OK/Fail.
Writing Method:	High-resolution, thermal array print head.
Printout Modes:	Manual, automatic.
Control:	Front panel or paddle.
Automatic Function:	15 second recording initiated by alarm conditions and defibrillator discharge.

## Batteries

Type:	Rechargeable, sealed lead-acid.
Charger:	ZOLL Battery Support System or ZOLL PowerCharger.
Recharge Time:	16 hours for full recharge with ZOLL Battery Support System. 4 hours or less with ZOLL PowerCharger.
Service:	Battery is easily removed as a unit.
Low Battery Indicator:	Message display on monitor with audible tone. Approximately 20 minutes of monitoring remain when message is displayed.
Operating Time:	With new fully charged battery - 35 defibrillator charges to maximum energy (360J), or 2.5 hours min. (3 hours typical) of continuous monitoring, or 2.5 hours of continuous monitoring/pacing at 60 mA, 80 beats/min.

## General

Size:	10.7 cm high x 33.5 cm wide x 31 cm deep (4.2 x 13.2 x 12.2 in).
Weight:	5.9 kg (13 lbs) with Multi-Function Cable; 6.8 kg (15 lbs) with paddles.
Warranty:	In North America: Comprehensive warranty including use of a loaner. Outside North America: consult ZOLL authorized representative.
Design Standards:	Designed to meet or exceed all AAMI specifications for defibrillators, UL 544, IEC 601, CSA standards for medical equipment, MIL-STD-810D: method 514.3, figure 514.3-35 (CAT. 6), swept sine, random vibration, universal helicopter, MIL-STD-810D, method 514.3 (CAT. 3), loose cargo transport without packaging.
Patient Safety:	All patient connections are fully isolated.
Temperature:	Operating: 0°C to 55°C. Storage: –40°C to 75°C. Humidity: 5% to 95% relative.

## Product Information

ZOLL PD 1400	Pacemaker/Defibrillator standard configuration includes the following: 1 set standard anterior/anterior defibrillator paddles (adult, pediatric), 1 battery pack, 1 ECG cable, 1 pacer output cable, 1 set adult electrodes, 1 set pediatric electrodes, 1 roll recorder paper, 2 operator's guides, 1 tube defib gel, 1 inservice videotape.
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ZOLL PD 1400 with PowerCharger Package	PD 1400 standard configuration and AC PowerCharger with battery pack.
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## Upgrades

- Advisory

ZOLL, PD, *stat•padz*, PowerCharger, ConnectAlarm, Smart Alarms, *Speed Pack* and *Preconnect* are trademarks of ZOLL Medical Corporation. Specifications subject to change without notice.

# ZOLL

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