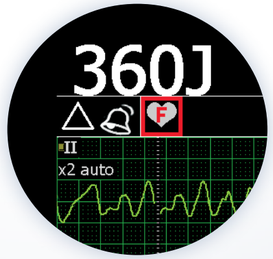
Cardio-Aid® 360-B
Biphasic Defibrillator



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TECHNICAL SPECIFICATION

Physical	
Dimensions	360x280x250 mm
Weight	6.3 kg (base unit) 7.7 kg (with battery and paddles)
Environmental	
IP Rating	IP32
Operating Temperature	0...45 °C
Storage Temperature	-20...+60 °C
Humidity	30%...95% (without condensation)
Display	
Dimensions	7" (177.7 mm) diagonal, active area 152.4 x 91.4 mm
Type	Color WVGA TFT LCD, LED backlight, adjustable brightness
Resolution	800 x 480 x 3 pixels
Viewing angle	170 degrees left/right and up/down
ECG window	4.4 sec at 25 mm/sec
Max. number of parameters	
Mains Power Supply	
Type	Built-In
Voltage	90..240 V
Current	Max. 1.2 A
Frequency	47..63 Hz AC
Power Factor	0.97 with Power Factor Correction
Battery	
Type	Ni-MH 10.8V 3000mAh
Dimensions	70 x 60 x 90 mm
Weight	620 g
Capacity	More than 5 hours continuous monitoring or 200 shocks at 200J
Indicator	5-stage indicator on screen and LED indicator when turned off
Charge time	Less than 2 hours for full charge
Defibrillator	
Mode	AED, manual and synchronized
Defi electrodes	Paddles, Pads and Internal
Waveform	STAR™ Biphasic Truncated Exponential
Energy for external defibrillation	2..360 J in 15 steps
Energy for internal defibrillation	1..50 J in 15 steps
Energy Selection	From paddles or front panel buttons, programmable for AED
Charge Time	2.7 sec to 200 J, 4.5 sec to 360 J
Energy Availability	Automatic disarm after 30 sec
Patient Impedance Range	15..200 ohms with indicator
Sync Time	40 msec typ.
Pacemaker (Optional)	
Mode	Demand (VVI) and Fixed Rate (VVO)
Type	Transthoracic non-invasive
Waveform	Rectilinear, constant current
Pulse Width	40 msec
Current Amplitude	0 and 20..200 mA, 1 mA resolution
Rate	30..200 ppm, 1 ppm resolution
Patient Impedance Range	0..1000 ohms with indicator

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ECG	
Source	Pads/Paddles, 3-, 5-, and 10-lead cables and EXT ECG cable
Number of leads	12 leads simultaneously
Number of displayed ECG waves	13 (12 leads and 1 rhythm)
Gain	2.5, 5, 10, 20 mm/mV and Auto
Speed	5, 10, 25, 50 mm/sec
Filters	High-pass, mains (50/60 Hz) and adjustable Low-pass filters
Heart Rate Display	15..300 bpm
Alarms	HR, Asystole, VF, VT
Pacemaker detection	Min. 2 mV 0.25 msec, max. 700 mV 2 msec
Defibrillator protection	Max. 400 J
Overload Recovery Time	< 3 sec, typ.
Lead-Off detection	For all leads
Pulseoxymetry (Optional)	
SpO_2 Range	1..100 %
Resolution	1 %
Pulse Rate	20..300 bpm
Alarms	For Lower and Upper limits, No Finger and sensor fall-off
Non-Invasive Blood Pressure (Optional)	
Method	Oscillometric
Range	Systolic: 40..260 mmHg, Diastolic: 25..200 mmHg
Displayed values	Systolic, Diastolic, Mean, Rate, Time of Last Measurement
Alarms	For Lower and Upper limits and cuff fault
Capnography (Optional)	
Type	Main- and Sidestream
Range	0..150 mmHg (0..19.7 %, or 0..20 kPa)
Resolution	0.1 mmHg
Respiration Rate Display	2..150 rpm
Alarms	For Lower and Upper limits and sensor fall-off
Alarm System	
Levels	3-level intelligent alarm system
Visual Alarm	Multicolor, configurable
Audible Alarm	Different sounds, configurable
Automatic Actions	Event Storage, Automatic Printout (configurable)
Data Storage	
Type	Internal memory
Stored events	Alarm conditions, manual events, shocks
Capacity	10000 events minimum
Export capability	USB drive
Report Browser Software	On PC, from exported USB data
Recorder (Optional)	
Type	Thermal Strip-Chart Recorder
Paper Width	58 mm
Number of Channels	1 or 3
Modes	Online, Stored Waves, Stored Events
12 channel ECG printout	Simultaneous, in 3x4 format
Reports	Events, Device Information, Date, Time, Modes, Parameters, Name
Automatic Printing	Configurable for Events, Shocks, Alarms
Gain	2.5, 5, 10, 20 mm/mV
Speed	25, 50 mm/sec

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Cardio-Aid® 360-B
Biphasic Defibrillator

- 360 J biphasic
- 2.7 sec charging time
- AED mode
- Pacer
- 12-channel ECG
- SpO_2
- NIBP
- Capnography

CE 0120

Seconds for life

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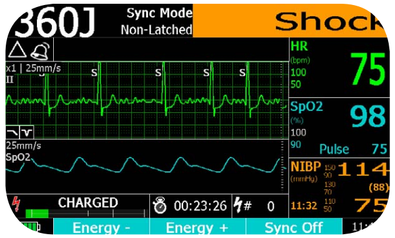
Cardio-Aid® 360-B biphasic defibrillator integrates state-of-the-art technologies which make quick life saving possible.



STAR™ biphasic waveform

The main goal of designing STAR™ (Self-Tracking Active Response) biphasic waveform was to optimize energy delivery. Maximal energy accuracy is guaranteed by the system under any circumstances, which ensures the most effective therapy for all patients

360 Joule

Cardio-Aid® 360-B delivers a biphasic shock even at 360 J energy level if it is necessary.

2.7 sec typical charging time*

The exceptionally short charging time ensures the quickest possible intervention, increasing the chance for survival.

AED mode

The user is guided by clear screen and voice commands through the resuscitation procedure according to the latest ERC guidelines. Safe and simple operation minimizes the chance of mistakes from user's side, after receiving a brief training.

VF detector

The applied VF/VT detector guarantees quick and reliable detection of patient arrhythmia both in AED and in manual modes.

Cardioversion

Using the latest technologies, the delay of detection is minimized, therefore the reliability of cardioversion therapy is guaranteed.

Impedance measurement

Patient's safety and efficiency of the therapy is achieved by the continuous monitoring of patient's chest impedance. The actual patient impedance is displayed on the screen on a bargraph, and a voice message also warns the user in case of insufficient contact.

Transcutaneous pacer

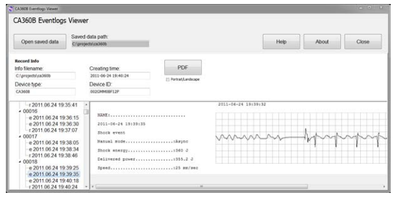
For quick intervention, not only disposable electrodes but also multifunctional defibrillation paddle-electrodes can be used during the application of external pacer therapy.

12-channel ECG

DSP technology based ECG helps the doctor with accurate information before and after intervention. Simultaneous, real 12-channel diagnostic quality ECG with pacemaker detection ensures the appropriate monitoring of patients even with implanted pacemaker.

Intelligent energy management

The intelligent battery managementalways gives adequate information on the status of the battery. The power consumption of the device has been



Event storage and printing

The event storage system is capable of storing practically unlimited number of events, which can be printed out online or offline, or even exported to a USB drive. PDF report also can be created on PC from the exported data. Automatic printing is also possible for several events.

Multifunctionality

Cardio-Aid® 360-B defibrillator is dedicated to clinical and hospital use. Due to its easy handling and high-level services, both experienced personnel and laymen can use it fast and effectively.
The reliable SunTech® NIBP module built in the device measures patient's blood-pressure in a fast and accurate way.
Precise oxygen saturation measurement is guaranteed by Nellcor™ pulseoxymeter technology.
The Philips Respironics CAPNOSTAT® and LoFlo™ capnograph modules provide reliable main- and sidestream CO2 monitoring.

ALL-IN-HAND™ simple handling

The multifunctional external paddle-electrodes are equipped with ergonomic setting keys. Energy level can be set, charging and shock delivery can be started from paddle-electrodes. Together with the voice messages, it allows the user to perform critical interventions, without touching or looking at the device. Paddles can be transformed to paediatric with a simple twist.

Design

Ergonomically designed housing provides comfortable portability.

Alarm system

The alarm system of the defibrillator is able to generate alarms from technical and physiological origin.
If any measured parameter exceeds the previously set alarm limits, or any sensor problem occurs, the device gives fully configurable visual and audible alarms and stores the event as well.

Multi-language

Cardio-Aid® 360-B defibrillator is available in different language configurations. Flexible expansion of language range: display messages, labels, manuals and voice prompts.

Accessories and options

Internal electrodes

ECG electrodes

Multifunctional paddles

Pacer electrodes

Pulseoxymeter sensor

Mainstream capnograph

NIBP cuff

Sidestream capnograph

Carrying bag

Printer