

BeneHeart S1A

BeneHeart S1A Fully Automatic

Automated External Defibrillator (AED)



Defibrillator

Operations	Semi-automatic and fully automatic versions
Waveform	Biphasic Truncated exponential (BTE), with automated voltage and duration compensation for patient impedance
Range of selected energy	100 to 360 J (adult) 10 to 200 J (child)
Energy default	200-300-360 J (adult) 100-100-200 J (child) Default configuration meets AHA2020/ERC2021 Guidelines.
Energy accuracy	± 2 J or ± 10 % of setting, whichever is greater
Power on time	< 2 seconds
ECG analysis time	< 5 seconds
Charge time	0 seconds (as device is pre-charged during ECG analysis)
Time from power on to shock ready	< 8 seconds (200J, new battery, $20 \pm 5^\circ\text{C}$)
Mindray shockable rhythm analysis algorithm	Acquires and analyzes the patient's ECG signals to determine whether or not to give a defibrillation shock
Sensitivity and specificity	Meets IEC 60601-2-4 specifications
Patient impedance range	25 to 300 Ω

User Prompts

User prompts	Voice prompts
CPR coaching	Voice guide CPR metronome CPR real-time feedback ¹
CPR protocol	Meets AHA/ERC Guidelines 2021 and/or can be configured locally

Controls

Lid release/ON-OFF	Controls device power on/off
Shock button	Delivers energy when button presses by the user (semi-automatic only)
Adult/child mode switch	Switch to child mode for reduced energy and appropriate CPR guidance

Language button	Optional feature allows the user to switch between max. 3 languages
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Physical Characteristics

Dimension(± 2 cm)	21.0 cm (w) x 28.6 cm (d) x 7.8 cm (h)
Weight	2.0 kg $\pm$ 0.4 kg (including one battery, excluding the Wi-Fi and cellular modules)

Display

Type	Dot matrix
Dimensions	1.96-inch

Environmental

Dust/water resistance	IP55
Temperature	Operating: -5 to 50 $^\circ\text{C}$ Short-term storage: -30 to 70 $^\circ\text{C}$ for a maximum of 7 days Long-term storage: 15 to 35 $^\circ\text{C}$
Humidity	Operating/storage: 5 to 95 % (non-condensing)
Altitude	Operating/storage: -381 m to +4575 m
Shock	RTCA-DO-160G-2010, Section 7 IEC60601-1-12, 10.1.3, 10.1.4
Vibration	MIL-STD-810G-2008, method 514.6, Category 13, Category 14, Category 20, Category 24 EN13718-1, 4.7.2
Bump	EN1789, 6.3.4.2 EN13718-1, 4.7.2
Drop	1.5 m
EMC	IEC60601-1-2: 2014 EN13718-1, 4.5.7 IEC 60601-1-12, 11

Battery

Type	Lithium manganese dioxide battery (Li/MnO ₂), disposable, 4200 mAh
Standby life	5 years (at 20 $\pm$ 5 $^\circ\text{C}$, performing auto test every day, not in use, wireless function turned off)
Capacity	With new battery at 20 $\pm$ 5 $^\circ\text{C}$:

	≥ 15 hours of operating times; provides max. 400 shocks @200J (± 3 shocks < 1 minute)
Low battery / replace battery indication	Min. 10 shocks at 200 J and 30 minutes of operating time (at 20±5 °C, typical).

Weight	300 g
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Electrode Pads

Type	Pre-connected, disposable, for adult/child
Shelf life	5 years (from date of manufacture)

CPR Sensor²

Weight	Approximately 180 g (without battery)
Thickness	17.5 to 19 mm

Automatic Self-test

Auto-test	Daily, weekly, monthly, quarterly
Status indicator	Visual indicators indicating system readiness

Data Storage

Events	Up to 500 events
Voice recording	Up to 1 hour
CPR data	Up to 5 hours
Self-test reports	1000 records
Data export	Through USB flash memory

Communications

Wireless data transfer to AED- Alert™ 2.0 system	Through 5G/2.4G Wi-Fi or cellular (4G) ³ network
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¹ Requiring to configure with CPR sensor

² For further information about the availability of CPR sensor, please contact with your local sales representatives.

³ For further information about the availability of 4G data transfer and AED-Alert™ 2.0 system, please contact with your local sales representatives.