

BeneHeart D60

Defibrillator / Monitor



Physical Features

Dimension	Spoon version: without external spoons, 275 mm (W) × 160 mm (D) × 280 mm (H) Ped version: 275 mm (H) × 155 mm (W) × 280 mm (H)
Height	4.3 kg (equipment configured with AC power input, 3/5 lead ECG, and manual defibrillation) 3.9 kg (equipment configured with DC power input, 3/5 lead ECG, and manual defibrillation, but without paddle tray)

Environmental and Physical Requirements

water resistance	IPX5
Resistance to solid	IP5X
Temperature	Operating: -20 to 55 °C ; Storage: -40 to 75 °C
Humidity	Operating/storage: 5% to 95% (non-condensing)
Height	Operating/storage range: -382 m to +4575 m
Shock	6.3.4.2, EN1789 (10.1.3, IEC60601-1-12), RTCA-DO-160G-2010, It meets the requirements for Section 7 medical devices.
Vibration	6.3.4.2, EN1789 (10.1.3, IEC60601-1-12), 10.1.4, IEC60601-1-12, MIL-STD-810G, method 514.6, The helicopter meets the category 14 medical equipment requirements, and the ground vehicle meets the category 20 medical equipment requirements.
Impact	It meets the requirements of clause 6.3.4.2 of the EN1789 directive.
free fall	1 fall from a height of 1.5 m to each surface (total of 6 surfaces) 1 fall 1 Equipment equipped with a carrying case, dropped from a height of 3.0 m from its normal operating position.
EMC	It meets IEC60601-1-2.
Security	Meets EN/IEC 60601-1.

Screen

Type	Tempered glass protected LCD color capacitive touchscreen.
Dimension	9 inches
Resolution	1200 × 1020 pixel
Display waveforms	Max. 7 canal
Wave display time	Max. 36 sec. (ECG)
Scanning Speed	EKG/SPO ₂ : 6,25, 12,5, 25 ad 50 mm/s RESP/CO ₂ : 3, 6,25, 12,5, 25, 50 mm/s
Trase Freezing	Yes
Screen Display	Yes
High Contrast Mode	Yes
Auto Brightness	Yes
motion control	Yes

Power

AC Power

Line voltage	100 to 240 V
Current	1.8 to 0.8 A
Frequency	50/60 Hz

DC Power (DC version)

Input Voltage	18 V 12-30,3 V, with the transport connection point
Input Current	7.2 Amax 15,5 to 6,5 A, with the transport connection point

Battery

Type	4500 mAh, rechargeable lithium-ion battery pack
Number	DC version: max. 2 AC version: max. 1
Charging time	With equipment switched off, reaching 90% in less than 3 hours and 100% in less than 4 hours.
Capacity Indicator	5-segment display for quick assessment of battery capacity.
Capacity (new and fully charged battery)	Monitoring mode: 6.5 hours, configured with 3-/5- lead ECG, manual defibrillation, screen brightness set to lowest level without printing. Defib mode: 220 times, 360 J discharge at 1-minute ranges, indifferent Stimulation mode: 4.5 hours, 50 Ohm load impedance, stimulation rate: 80 bpm, stimulation output: 60 mA

Recording Device

Method	High-resolution thermal dot array
Waveforms	Max. 6 canal
Speed	6,25 mm/s, 12,5 mm/s, 25 mm/s, 50 mm/s
paper width	110 mm
Reports	Real-time waveforms, real-time ST, real-time QT, real-time event, physiological alarm, frozen waveforms, chart trend review, chart trend review, physiological event review, full record review, 12-lead analysis review, recovery record, event summary, automated testing and configuration.
Auto Recording	The recorder can be configured to record marked events, charging, shock, alarm, automatic test.

Veri Depolama

Dâhili depolama	4 GB
Olaylar	Bir hasta için 1000 olaya kadar
Dalga biçimi depolama	120 saate kadar ardışık EKG dalga biçimi
Tablo trendleri	200 saat, çözünürlük: 1 dak
Ses kaydı	Her hasta için en az 8 saat
Veri dışa aktarımı	Veriler USB flaş bellek yoluyla bilgisayara aktarılabilir

Defibrillator

Waveform	Impedance-balanced two-phase truncated exponential waveform
Energy accuracy	± 2 J or 10% of the set value (whichever is greater), to 50 Ohms
Power on time	In less than 2 seconds with a fully charged new battery.
Charging Time	Tam şarjlı yeni bir pille 200 J'e kadar 3 saniyeden az Tam şarjlı yeni bir pille 360 J'e kadar 7 saniyeden az
ECG recovery time	Less than 2.5 seconds.
shock distribution	Multifunctional defibrillator electrode pads or paddles
Patient impedance range	25 to 300 Ω (external defibrillation)
Manuel Mod	
Output Energy	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 25, 30, 50, 70, 100, 120, 150, 170, 200, 300, 360J
Synchronous Cardioversion	Energy transfer begins within 60 ms of the QRS peak. Energy transfer begins within 25 ms of the external synchronization stimulus peak value.
AED Mode	
Output Energy	User configurable
AED shock series	Energy level: 100 to 360J, configurable for adults; 10 to 100J, configurable for pediatrics Shocks: 1, 2, 3, configurable. Meets 2020 AHA/2021 ERC guidelines by default.
The time from rhythm analysis to charging	Initial analysis: 10s Non-initial analysis: 6s
AED Mode Monitor Parameters Sensitivity and specificity	ECG, SPO ₂ , CO ₂ , NIBP, filtered ECG, CPR feedback, CCF, CQI It meets IEC 60601-2-4 and AHA recommendations.

Non-invasive stimulation

Waveform	Monophasic square wave stimulation
Stimulation width	20 ms or 40 ms, ± 5%
refractory period	200 - 300 ms, ± 3% (speed function) stimulation mode
stimulation mode	Demand or fixed
Stimulation rate	30 ppm to 210 ppm, ± 1,5%
excitation output bigger	0 mA to 200 mA, ± 5% or 5 mA, whichever is bigger
4:1 ratio	When activated, the pacing pulse rate is reduced by a factor of 4.

ECG

Derivation type	3-lead ECG, 5-lead ECG, 12-lead ECG
Derivation selection	3 lead: I, II, III 5 lead: I, II, III, aVR, aVL, aVF, V 12 lead: I, II, III, aVR, aVL, aVF, V1 to V6
Heart rate display	Adult: 15 to 300 bpm Pediatric: 15 to 350 bpm Newborn: 15 to 350 bpm
Resolution	1 bpm
Arrhythmia	Yes
Alarms	Yes
ST/QT monitoring	Yes
ECG dimension	1,25 mm/mV (×0,125), 2,5 mm/mV (×0,25),

Scanning speed	5 mm/mV (×0,5), 10 mm/mV (×1), 20 mm/mV (×2), 40 mm/mV (×4), Auto 6,25 mm/s, 12,5 mm/s, 25 mm/s, 50 mm/s Patient isolation (defibrillation resistant)
Myocardial infarction (MI) position diagram	Type CF: EKG, RESP, SpO ₂ , NIBP, IBP, TEMP Type BF: CO ₂ Yes

Respiration

Method	Transthoracic impedance
Range	Adult: 0 to 200 rpm Pediatric, newborn: 0 to 200 rpm
Resolution	1 rpm

SpO₂ Pulse Oximeter

Mindray SpO₂	
Range	%0 to %100
Resolution	%1
PR range	20 to 300 bpm
Nellcor SpO₂	
Range	%0 to %100
Resolution	%1
PR range	20 to 300 bpm
Masimo SpO₂	
Range	1 to %100
Resolution	%1
PR range	25 to 240 bpm

NIBP

Working mode	Manual, Auto, STAT, Sequence
Static pressure range	0 to 300 mmHg
Pressures shown	Systolic, Diastolic, Mean
Cuff inflation pressure (default)	Adult: 160 mmHg Pediatric: 140 mmHg Neonatal: 90 mmHg
PR Range	30 to 300 bpm

CO₂

Side stream CO₂	
Measuring range	0 to 150 mmHg
Resolution	1 mmHg
awRR measuring range	0 to 150 rpm
awRR accuracy	< 60 rpm: ± 1 rpm 60 to 150 rpm: ±2 rpm
Numune Akış Hızı	50 ml/min

Temperature

Parameter	T1, T2, TD
Range	0 to 50°C (32 to 122°F)
Resolution	0,1°C
Infrared ear thermometer	Can be received via NFC

IBP

Canals	2
Zero setting range	± 200 mmHg
Resolution	1 mmHg
Sensibility	5 µV/V/mmHg
Measuring Range	-50 to 360 mmHg

CPR Feedback

Monitored Parameters	From CPR sensor*: speed, depth, response, compression ratio (CCF), interruption time From pads: speed, interruption time From Mindray SPO ₂ : speed, CCF, interruption time, Compression Quality Index (CQI)
CPR Metronome	Yes
CPR countdown	Yes
CPR filter	Yes

CPR Sensor*

Weight	Approximately 180 gr (Without battery)
Thickness	17,5 to 19 mm
compression depth cm	Measuring Range: 0 to 8 Accuracy: ± 5 mm or 10%, whichever is greater.
Compression speed	Measurement range: 40 to 160 cpm Accuracy: ±2 cpm

Point-of-care Ultrasound

Probe type	phase sequential
Resolution	
Applying	Supports gain, depth, and adjusting TGC. Supports freezing, playing back, and saving images. Supports reviewing, printing, and sending reports. Provides step-by-step trauma identification, operation guidance, and reference images.

Rating and Warning Tools

Scoring type	GCS, P-GCS score NEWS, MEWS, NEWS2 score HEART score
TBI warning	Provides trend and warning tips for SPO ₂ , EtCO ₂ , SBP, and GCS scores.

* Some functions marked with an asterisk may not be available. Please contact your local Mindray sales representative for the most up-to-date information.

network

data connection	Wired, Wi-Fi, 4G, Bluetooth*
Data transfer	
patient data	In-hospital: Sends real-time data to CMS or HL7 service via Wi-Fi or wired network Pre-hospital: Sends real-time data to CMS via 4G network and to third-party ePCR via Bluetooth*
Device data	The device sends data (automatic test report, battery status, etc.) to the device management system via Wi-Fi or wired network.