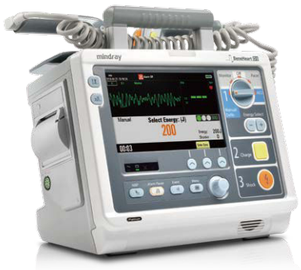
mindray

BeneHeart D3

Defibrillator/Monitor

More than a fast defibrillator



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P/N:ENG-BeneHeart D3-210285x8P-20180411

mindray
healthcare within reach

4-in-1 design and powerful function for full spectrum applications

With a 4-in-1 integrated design (manual defibrillation, AED, pacing, and monitoring modes), BeneHeart D3 puts any unexpected circumstances under your control.

Manual Defibrillation

Asynchronised defibrillation mode for cardioversion of ventricular fibrillation. Synchronised defibrillation mode for cardioversion of atrial fibrillation.

AED

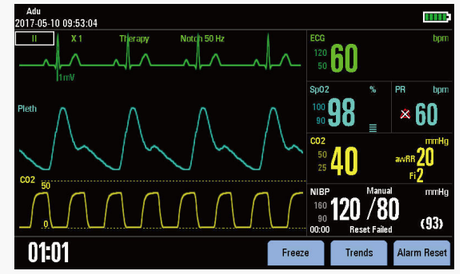
In AED mode, BeneHeart D3 automatically analyses the rhythm and determines whether a shock is necessary. Voice and text prompts guide the user through the process. Voice recording(180 minutes) is also available for after-case analysis and review.

Monitoring

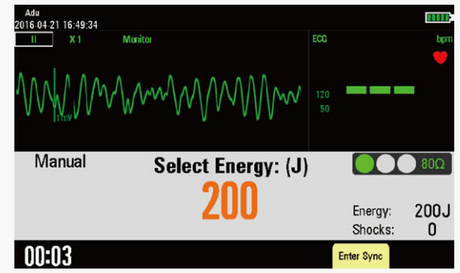
Diagnostic quality, 3/5 lead ECG monitoring with respiration, NIBP, SpO_2 and $EtCO_2$.

Non-invasive pacing

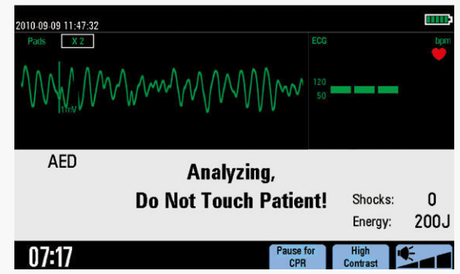
BeneHeart D3 offers external pacing in demand mode and fixed mode with adjustable rates and output. The 4:1 key enables clinicians to quickly select 1/4 of the defined pacer rate for observation of the patient's underlying rhythm.



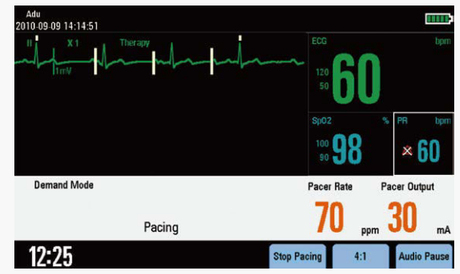
Monitoring



Manual Defibrillation



AED



Non-invasive pacing

Fast defibrillation

The fastest defibrillator

Mindray strives for constant innovation to improve the clinical aspects of product performance. The new generation of technology platform enables Mindray to improve the performance of the BeneHeart D3 defibrillator to meet changing clinician needs.

BeneHeart D3 gives you a greater chance of success for those patients suffering cardiac arrest. It only takes 7.5 seconds to complete the whole defibrillation operation. Studies show that when a patient suffers cardiac arrest, success rates for defibrillation drop for every second between CPR and defibrillation shock. Every second counts for cardiac arrest patients.*

**Edelson DP, Abella BS, Kramer-Johansen J, et al. Effects of compression depth and pre-shock pauses predict defibrillation failure during cardiac arrest. Resuscitation. 2006 Nov;71(2):137-45.*

Power on in 2 seconds

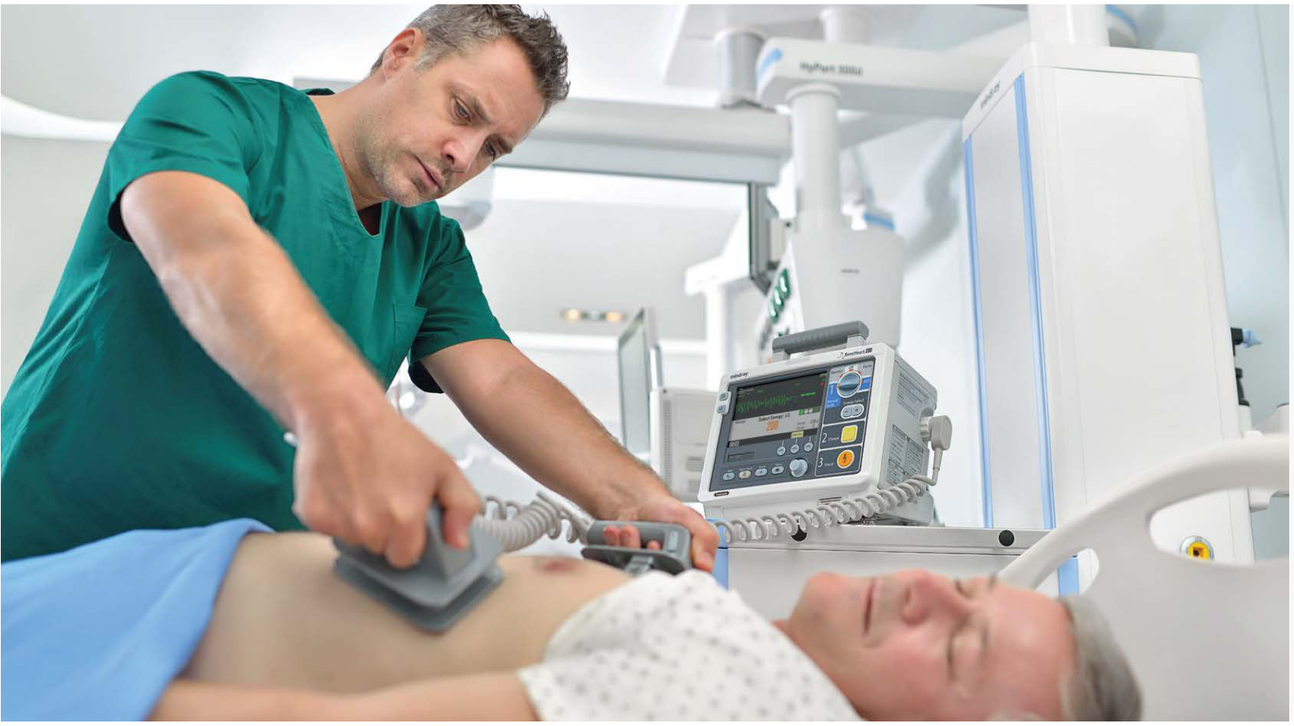
Ultra fast power on due to our unique low-power dissipation sleep technology delivers more confidence for clinicians to handle any emergency situation.

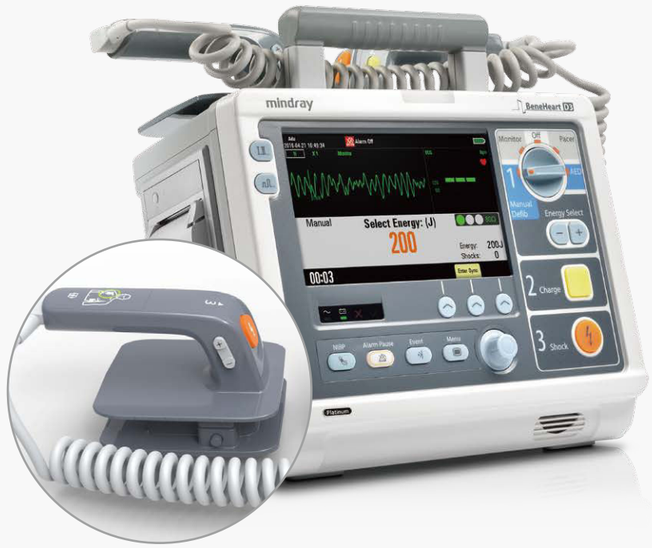
Charge to shock in 3 seconds

Our improved battery performance and energy control system delivers charge to 200J and shock in only 3 seconds, allowing clinicians to focus on patients rather than the device.

ECG recovery in only 2.5 seconds

Our new DC Coupling Technology delivers rapid ECG recovery, meaning clinicians can evaluate the effectiveness of defibrillation and diagnose the patients condition immediately.





Manual defibrillation with clear 1-2-3 steps

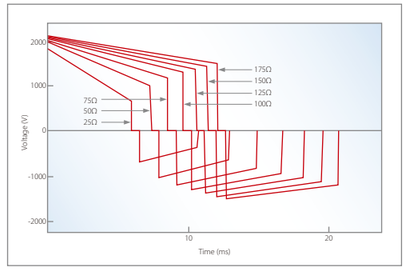
1. Select Energy
2. Charge
3. Shock

External Paddles with function buttons

Buttons for energy selection, charging and shock delivery improve usability for clinicians.

360J high energy

BeneHeart D3 defibrillator/monitor features 360J biphasic technology, which increases the chance to save difficult-to-defibrillate patients. Studies have shown that cardiac arrest is common among ventricular fibrillation (VF) patients and that defibrillation of recurring episodes of VF is increasingly difficult. A randomised controlled clinical trial shows the rate of VF termination increases with charge energy, when charge energy is 200J and above.*

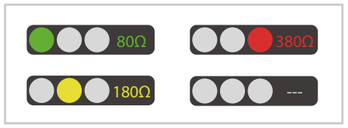


When impedance is adjusted, voltage and energy delivery cycle are adjusted automatically to correspond with impedance

**Stiell I, Walker R, Nesbitt L, et al. Biphasic Trial: A randomized comparison of fixed lower versus escalating higher energy levels for defibrillation in out-of-hospital cardiac arrest. Circulation. 2007;115:1511-1517.*

Intuitive contact impedance indicator

Colour coded indicator with real contact impedance value provides a more intuitive guide to clinicians.

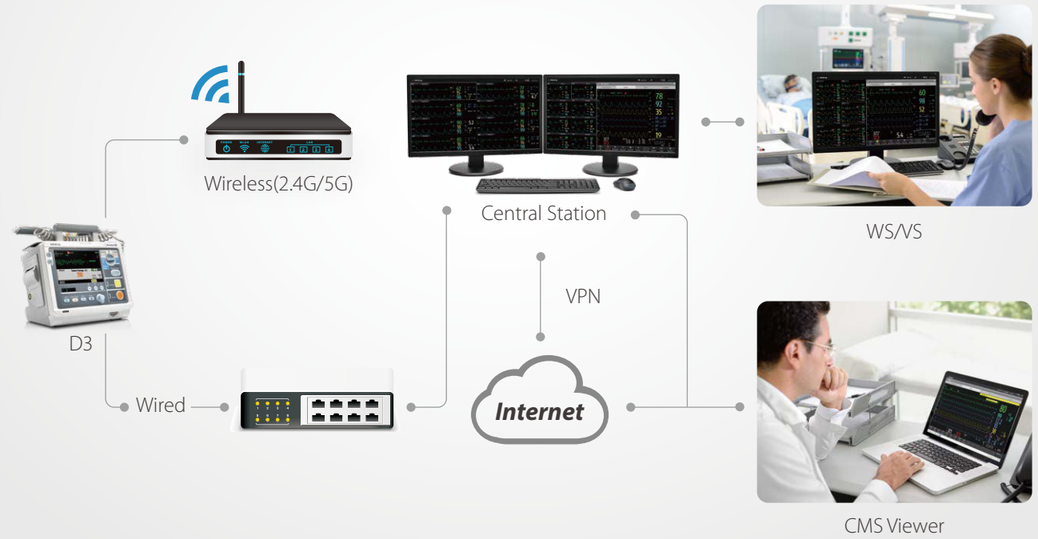


Adult/Paediatric mode

When changing from adult to paediatric mode, the default shock energy, monitoring range and parameter alarm limits change automatically to deliver the best treatment effect for both types of patients.

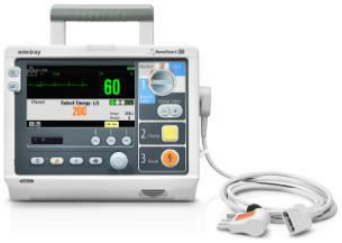
Effective IT solution

Our simple yet effective IT solution manages all the information from BeneHeart D3 defibrillator/monitors to avoid manual recording and so improve efficiency and reduce the workload of clinical staff. All information can be databased.
A simple yet robust network connection following standard information infrastructure in most hospitals: Transmit data through 5G/2.4G WiFi, international standard IHE HL7 protocol and DHCP to obtain IP address automatically.



BeneHeart D3

Defibrillator / Monitor



Physical Specifications

Dimension	288 mm (w) x 203 mm (d) x 275 mm (h)
Weight	
Main unit	4.7 kg
Battery package (each)	0.54 kg
External paddle set	0.86 kg

Environmental and Physical Requirements

Water resistance	IPX4 (without external power)
Solids resistance	IP4X
Temperature	Operating: 0 to 45 °C Storage: -30 to 70 °C
Humidity	Operating/storage: 15 to 95 % (non-condensing)
Altitude	Operating/storage: -381 m to +4575 m
Shock and vibration	Meets the requirements of 21.102, ISO9919 (Shock and vibration for transport)
Bump	Meets the requirements of 6.3.4.2, EN1789 (Medical devices for use in road ambulances)
Free fall	Meets the requirements of 6.3.4.3, EN1789 (Height of fall: 0.75 m)
EMC	Meets IEC60601-1-2
Safety	Meets EN/IEC 60601-1

Display

Type	TFT Color LCD
Dimensions	7 inch
Resolution	800 × 480 pixels
Display waveforms	Max. 3 channels
Wave viewing time	Max. 16 s (ECG)

Power

AC Power	
Line voltage	100 to 240 V~ (±10%)
Current	1.8 to 0.8 A
Frequency	50/60 Hz (±3 Hz)
DC Power (through DC-AC Inverter)	
Input voltage	12 VDC
Power consumption	190 W
Battery	
Type	15.1 V, 5600 mAh, rechargeable lithium ion battery pack
Number	1
Charge time	Less than 3 hours to 90% and less than 4 hours to 100% with equipment power off
Capacity indicator	5-segment led indicator for fast battery capacity evaluation
Capacity (new, fully charged battery)	Monitoring mode: 6 hours, monitoring with a 5-lead ECG, Resp, SpO_2, CO_2 and NIBP measurements set at an interval of 15 minutes. Wi-Fi is disabled Defib mode: 200 times, 360 J discharge at intervals of 1 minute without recording Pacing mode: 4.5 hours, 50 Ohm load impedance, pacing rate: 80 bpm, pacing output: 60 mA

Recorder

Method	High-resolution thermal dot array
Waveforms	Max. 3 channels
Speed	6.25 mm/s, 12.5 mm/s, 25 mm/s, 50 mm/s
Paper width	50 mm
Reports	Real time waveforms, Event Summary, Tabular Trends, Frozen Waveforms, Review , User test, and Configuration
Auto recording	Recorder can be configured to record marked events, charge, shock , alarm, auto test

Data Storage

Patient profiles	Max. 100 patients
Events	Up to 1000 events for one patient
Waveform storage	Up to 24 hours of consecutive ECG waveform
Tabular trends	72 hours, resolution: 1 min
Voice recording	Max. 180 min in total; max. 60 min for each patient
Data export	Data can be exported to PC through USB flash memory

Defibrillator

Waveform	Biphasic truncated exponential waveform , with impedance compensation
Energy accuracy	±2 J or 15 % of setting, whichever is greater, into 50 Ohm
Power on time	Less than 2 seconds with a new, fully charged battery
Charge time	Less than 3 seconds to 200 J with a new, fully charged battery Less than 7 seconds to 360 J with a new, fully charged battery
ECG recovery time	Less than 2.5 seconds
Shock delivery	Via multifunction defib electrode pads, or paddles
Patient impedance	25 to 300 Ω (external defibrillation)
Range	
Manual Mode	
Output energy	1, 2, 3, 4, 5, 6, 7, 8, 9, 10 , 15, 20, 30, 50, 70, 100, 150, 170, 200, 300, 360 J
Synchronous cardioversion	Energy transfer begins within 60 ms of the QRS peak Energy transfer begins within 25 ms of the external sync pulse
AED Mode	
Output energy	User configurable
AED shock series	Energy level: 100 to 360 J, configurable Shocks series: 1, 2, 3, configurable Default configuration meets 2015 AHA Guidelines CPR mode with 1-channel ECG monitoring
Sensitivity and specificity	Meets AAMI DF-80

Noninvasive Pacing

Waveform	Monophasic square wave pulse
Pulse width	20 ms or 40 ms, ±5 %
Refractory period	200 to 300 ms, ±3 % (function of rate)

Pacing mode	Demand or fixed
Pacing rate	30 ppm to 210 ppm, ±1.5 %
Pacing output	0 mA to 200 mA, ±5 % or 5 mA, whichever is greater
4:1 pacing	Pacing pulse frequency reduced by factor of 4 when activated

ECG

Lead type	3 leads ECG, 5 leads ECG
Lead selection	3 leads ECG: I, II, III; 5 leads ECG: I, II, III, aVR, aVL, aVF, V
Heart rate display	Adult: 15 to 300 bpm Pediatric: 15 to 350 bpm Neonate: 15 to 350 bpm
Resolution	1 bpm
Arrhymia	Yes
Alarms	Yes
ECG size	2.5 mm/mV (×0.25), 5 mm/mV (×0.5), 10 mm/mV (×1), 20 mm/mV (×2), 40 mm/mV (×4), Auto
Sweep speed	6.25 mm/s, 12.5 mm/s, 25 mm/s, 50 mm/s
Patient isolation (defibrillation proof)	Type CF: ECG, RESP, SpO_2 , NIBP Type BF: CO_2

Respiration

Method	Trans-thoracic impedance
Range	Adult: 0 to 200 rpm Pediatric, neonate: 0 to 200 rpm
Resolution	1 rpm

SpO_2 Pulse Oximetry

Mindray SpO_2	
Range	0 to 100 %
Resolution	1 %
PR range	20 to 300 bpm
Nellcor SpO_2	
Range	1 to 100 %
Resolution	1 %
PR range	20 to 300 bpm

NIBP

Operating mode	Manual, Auto, STAT
Static pressure range	0 to 300 mmHg
Displayed pressures	Systolic, Diastolic, Mean
Cuff inflation pressure (default)	Adult: 160±5 mmHg Pediatric: 140±5 mmHg Neonate: 90 ± 5 mmHg

CO_2

Measurement range	0 to 150 mmHg
Resolution	1 mmHg
awRR measurement range	0 to 150 rpm
awRR accuracy	0<60 rpm: ±1 rpm 60 to 150 rpm: ±2 rpm

CPR Compression

Weight	Approximately 180 g (without battery)
Thickness	17.5 to 19 mm
Compression depth	Measurement range: 0 to 8 cm Accuracy: ±5 mm or 10 %, whichever is greater
Compression rate	Measurement range: 40 to 160 cpm (compressions per minute) Accuracy: ±2 cpm (compression per minute)
Interruption time	0 to 300 s
CPR filter	Yes

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P/N: ENG-BeneHeart D3 Datasheet-210285x4P-20180515

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BeneHeart D3/BeneHeart D2

Defibrillator/Monitor

Operator’s Manual

CE 0123

- Release time: January 2019
- Revision: 8.0

2.3.4 External Paddles

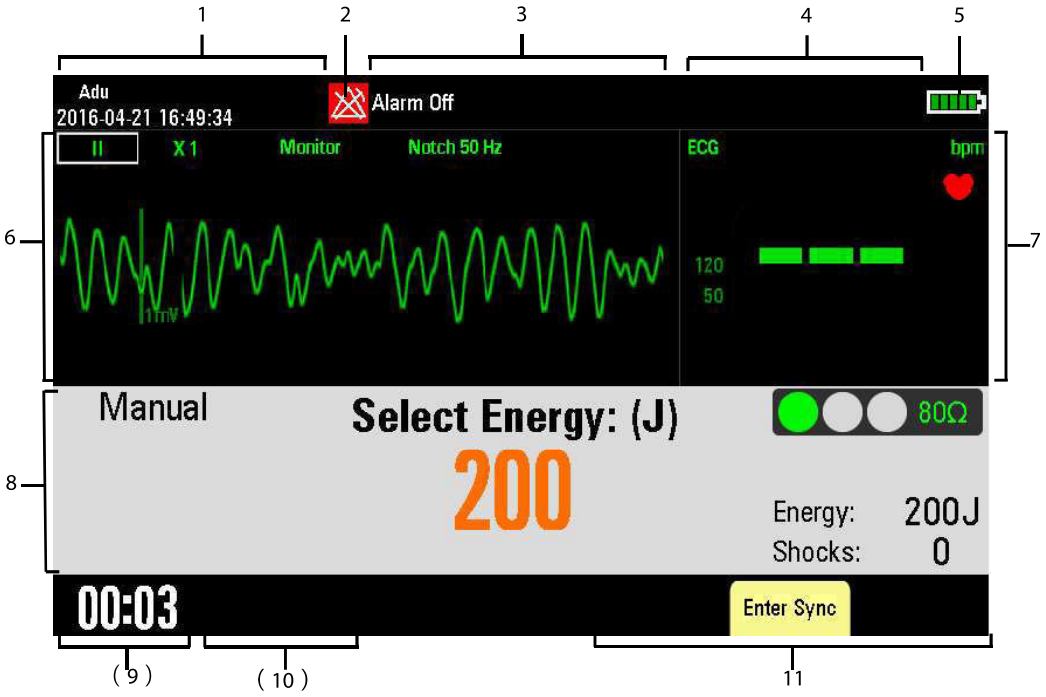
Apex paddle

Sternum paddle

1. Shock button
2. Charge button
3. Energy Select button

2.4 Display Views

A typical screen in Manual Defib Mode is shown below.



1. Patient Information area

   This area shows patient name, patient category, paced status, and current date and time.

   - : indicates that the patient has an implanted pacemaker.

2. Alarm status symbols

   indicates alarms are paused.

   indicates alarm are reset.

   indicates alarm sounds are turned off.

   indicates the system is in alarm off status.

3. Physiological Alarm area

   This area shows physiological alarm messages. When multiple alarms occur, they will be displayed circularly.

4. Technical Alarm area

   This area shows technical alarm messages and prompt messages. When multiple messages come, they will be displayed circularly.

5. Battery Status indicator

   It indicates battery status. Refer to chapter *23 Batteries* for details.

6. Waveform area

   This area shows measurement waveforms. The waveform label is displayed at the upper left corner of the waveform.

7. Parameter area

   This area shows measurement parameters. Each measurement module has a parameter block and the parameter name is displayed at the upper left corner.

8. Manual Defib information area

   This area shows the selected defibrillation energy, shock counter as well as prompt related to manual defibrillation.

A.4 Pacer Specifications

Standards	Meet standards of IEC 60601-2-4
Pacing mode	Demand, fixed
Output waveform	Monophasic square wave pulse pulse width 20 ms or 40 ms Accuracy: ±5%
Pacing rate	30ppm to 210ppm Accuracy: ±1.5% Resolution: 5 ppm
Pacing output	0mA to 200mA, Accuracy: ±5% or ±5mA, whichever is greater Resolution: 1mA, 2mA or 5mA
Refractory period	200 to 300 ms (depending on pacing rate)
4:1 pacing	Pacing pulse frequency reduced by factor of 4 when this function is activated.
Output protection	The equipment has no sign of damage after defibrillation-proof test.

A.5 Monitor Specifications

ECG (from ECG lead set)	
Standards	Meet standards of IEC 60601-2-27
Patient connection	3-lead ECG cable, 5-lead ECG cable
ECG inputs	3-lead ECG set: I, II, III 5-lead ECG set: I, II, III, aVR, aVL, aVF, V
Gain	2.5 mm/mV (×0.25), 5 mm/mV (×0.5), 10 mm/mV (×1), 20 mm/mV (×2), 40mm/mV (×4), Auto. Error less than ± 5%
Paper speed	6.25mm/s, 12.5 mm/s, 25 mm/s, 50 mm/s. Error no more than ± 5%
Bandwidth (-3dB)	Diagnostic mode: 0.05 to 150 Hz Monitor mode: 0.5 to 40 Hz Therapy mode: 1 to 20 Hz
Common mode rejection	Diagnostic mode: >90 dB Monitor mode: >105 dB Therapy mode: >105 dB
Notch filter	50/60Hz, In Monitor, Therapy modes: notch filter turns on automatically In Diagnostic mode: notch filter is turned on manually
ECG signal range	±8mV (peak-to-peak value)
Calibration signal	1mV (peak-to-peak value) ±5%
Differential input impedance	≥5 MΩ
Electrode offset potential tolerance	±500mV
Defibrillation protection	Enduring 5000V (360 J) charge without data loss or corruption Baseline recovery time: <2.5 s (after defibrillation) Polarization recovery time: <10 s Defibrillation energy absorption: ≤10% (100Ω load)
ESU protection	Cut mode: 300 W Coagulate mode: 100 W Recovery time: ≤10 s In compliance with the requirements in clause 202.6.2.101 of IEC 60601-2-27
Pace Pulse	

ECG (from defibrillation electrodes)	
Patient connection	paddles or multifunction electrode pads
ECG inputs	pads/paddles
Gain	2.5 mm/mV (×0.25), 5 mm/mV (×0.5), 10 mm/mV (×1), 20 mm/mV (×2), 40mm/mV (×4), Auto. Error less than ± 5%
Paper speed	6.25mm/s, 12.5 mm/s, 25 mm/s, 50 mm/s. Error no more than ± 10%
Bandwidth (-3dB)	Therapy mode: 1 to 20 Hz
Common mode rejection	Therapy mode: >105 dB
Notch filter	50/60Hz In Therapy mode: notch filter turns on automatically
ECG signal range	±8mV (peak-to-peak value)
Calibration signal	1mV (peak-to-peak value) ±5%
Differential input impedance	≥5 MΩ
Electrode offset potential tolerance	±1V
Defibrillation protection	Enduring 5000V (360 J) charge without data loss or corruption Baseline recovery time: <2.5 s (after defibrillation) Polarization recovery time: <10 s Defibrillation energy absorption: ≤10% (100Ω load)
ESU protection	Cut mode: 300 W Coagulate mode: 100 W Recovery time: ≤10 s In compliance with the requirements in clause 202.6.2.101 of IEC 60601-2-27
Pace Pulse	
Pace pulse markers	Pace pulses meeting the following conditions are labelled with a PACE marker: Amplitude: ±2 to ± 700 mV Width: 0.1 to 2 ms Rise time: 10 to 100 µs
Pace pulse rejection	When tested in accordance with the IEC 60601-2-27: 201.12.1.101.13, the heart rate meter rejects all pulses meeting the following conditions. Amplitude: ±2 to ± 700 mV Width: 0.1 to 2 ms Rise time: 10 to 100 µs
HR	
Measurement range	Pediatric 15 to 350 bpm Adult 15 to 300 bpm
Accuracy	±1% or ±1bpm, which ever is greater
Resolution	1 bpm
Sensitivity	200 µV
Heart rate averaging	In compliance with the requirements in Clause 201.7.9.2.9.101 b) 3) of IEC 60601-2-27, the following method is used: If the last 3 consecutive RR intervals are greater than 1200 ms, the 4 most recent RR intervals are averaged to compute the HR. Otherwise, heart rate is computed by subtracting the maximum and minimum ones from the most recent 12 RR intervals and then averaging them. The HR value displayed on the screen is updated every second.
Response time to heart rate change	Meets the requirements of IEC 60601-2-27: Clause 201.7.9.2.9.101 b) 5). From 80 to 120 bpm: less than 11 s From 80 to 40 bpm: less than 11 s

E Alarm Messages

This chapter lists only the most important physiological and technical alarm messages. Some messages appearing on your equipment may not be included.

In this chapter:

- The "I" column indicates how indications of technological alarms are cleared after the hardkey or [**Alarm Reset**] softkey is pressed: "A" means all alarm indications are cleared; "B" indicates alarm light and alarm tones are cleared and the alarm messages change to prompt messages; and "C" indicates only alarm tone is disabled, but alarm light and alarm message remain presented.
- The "L" column indicates the alarm level: "H" refers to high, "M" refers to medium, and "L" refers to low. "*" means the alarm level is user-adjustable.
- XX represents a measurement or parameter label, such as ECG, NIBP, HR, PVCs, RR, SpO_2, PR, etc.

In the "Cause and solution" column, corresponding solutions are given instructing you to troubleshoot problems. If the problem persists, contact your service personnel.

E.1 Physiological Alarm Messages

Measurement	Alarm Message	L	Cause and solution
XX	XX Too High	M*	XX value has risen above the high alarm limit or fallen below the low alarm limit. Check the patient's condition and check if the patient category and alarm limit settings are correct.
	XX Too Low	M*	
ECG	Asystole	H	Arrhythmia has occurred to the patient. Check the patient's condition and the ECG connections.
	V-Fib/ V-Tach	H	
	Vent. Brady	H	
	Extreme Tachy	H	
	Extreme Brady	H	
	Brady	M*	
	Tachy	M*	
	R on T	M*	
	PVC	M*	
	VT>2	M*	
	Couplet	M*	
	Bigeminy	M*	
	Trigeminy	M*	
	Missed Beats	M*	
	Vent. Rhythm	M*	
	Multif. PVC	M*	
	Nonsus. Vtac	M*	
	Pause	M*	
	Irr. Rhythm	M*	
	A-Fib	M*	
	PNP	M*	The pacer appears abnormal. Check the pacer.
	PNC	M*	

Measurement	Alarm Message	L	Cause and solution
Resp	Resp Apnea	H	The respiration signal was so weak that the equipment cannot perform respiration analysis. Check the patient's condition and the Resp connections.
	Resp Artifact	H	The respiration circuit is disturbed. Check for any possible sources of signal noise.
SpO_2	SpO_2 Desat	H	The SpO_2 value has fallen below the desaturation alarm limit. Check the patient's condition and check if the alarm limit settings are correct.
	No Pulse	L	The pulse signal was so weak that the equipment cannot perform pulse analysis. Check the patient's condition, SpO_2 sensor and measurement site.
CO_2	CO2 Apnea	H	The patient stops breathing, or the respiration signal was so weak that the equipment cannot perform respiration analysis. Check the patient's condition, CO_2 accessories and airway connections.

E.2 Technical Alarm Messages

Measurement	Alarm Message	L	I	Cause and solution
XX	XX SelfTest Err	H	C	An error occurred to the XX module, or there is a problem with the communications between the module and the host. Restart the equipment.
	XX Init Err	H	C	
	XX Comm Err	L	C	
	XX Comm Stop	H	C	
	XX Overrange	L	C	The measured XX value is not within the specified range for XX measurement. Contact your service personnel.
ECG	ECG Lead Off	L*	B	The ECG electrode has become detached from the patient or the lead wire has become disconnected from the trunk cable. Check the connection of the electrodes and leadwires.
	ECG YY Lead Off (YY represents the leadwires V, LL, LA, and RA, as per AHA standard, or C, F, L and R as per IEC standard.)	L*	B	
	Pads/Paddles off	L*	B	The pads/paddles have been detached from the patient or the therapy cable is loose. Check that the pads/paddles and therapy cable are properly connected.
	ECG Noise	L	A	The ECG signal is noisy. Check for any possible sources of signal noise form the area around the cable and electrode, and check the patient for excessive motion.
	ECG Signal Invalid	L	A	ECG amplitude is so low that ECG signal is undetectable. Check for any possible source of interference from the area around the cable and electrode; check the patient's condition.

Measurement	Alarm Message	L	I	Cause and solution
SpO_2	SpO_2 Sensor Off	L*	B	The SpO_2 sensor has become detached from the patient or the module, or there is a fault with the SpO_2 sensor, or an unspecified SpO_2 sensor has been used. Check the sensor application site and the sensor type, and make sure the sensor is not damaged. Reconnect the sensor or use a new sensor.
	SpO_2 Sensor Fault	L	C	
	SpO_2 No Sensor	L	B	
	SpO_2 Unknow Sensor	L	C	
	SpO_2 Sensor Incompatible	L	C	
	SpO_2 Too Much Light	L	C	There is too much light on the SpO_2 sensor. Move the sensor to a place with lower level of ambient light or cover the sensor to minimize the ambient light.
	SpO_2 Low Signal	L	C	The SpO_2 signal is too low or too weak. Check the patient's condition and change the sensor application site. If the error persists, replace the sensor.
	SpO_2 Weak Signal	L	C	
	SpO_2 Weak Pulse	L	C	
	SpO_2 Low Perf	L	B	
	SpO_2 Interference	L	C	The SpO_2 signal has been interfered. Check for any possible sources of signal noise form the area around the sensor, and check the patient for excessive motion.
	SpO_2 Non-Pulsatile	L	C	
	SpO_2 Board Fault	L	C	There is a problem with the SpO_2 measurement board. Do not use the module and contact your service personnel.
NIBP	NIBP Loose Cuff	L	A	The NIBP cuff is not properly connected, or there is a leak in the airway.
	NIBP Air Leak	L	A	
	NIBP Pneumatic Leak	L	A	Check the NIBP cuff and pump for leakages.
	NIBP Cuff Type Wrong	L	A	The cuff type applied mismatches the patient category. Verify the patient category and replace the cuff.
	NIBP Air Press. Err	L	A	An error occurred to the air pressure. Verify that the equipment application site meets the environmental requirements and check if there is any source that affects the air pressure.
	NIBP Weak Signal	L	A	The patient's pulse is weak or the cuff is loose. Check the patient's condition and change the cuff application site. If the problem persists, change the cuff.
	NIBP Sig. Saturated	L	A	The NIBP signal is saturated due to excess motion or other sources.
	NIBP Overrange	L	A	The patient's NIBP value may be beyond the specified measurement range.
	NIBP Excessive Motion	L	A	Check the patient's condition and reduce the patient motion.
	NIBP Equip Err	H	A	An error occurred during NIBP measurement and therefore the equipment cannot perform analysis correctly. Check the patient's condition and NIBP connections, or replace the cuff.
	NIBP Time Out	L	A	
	NIBP Measure Failed	L	A	
	NIBP Reset For Err	L	A	An illegal reset occurred during NIBP measurement. Check if the airway is occluded.

Measurement	Alarm Message	L	I	Cause and solution
CO_2	CO2 Sensor High Temp	L	C	Check, stop using or replace the sensor.
	CO2 Occlusion	L	C	The airway or watertrap was occluded. Check the airway and remove the occlusion.
	CO2: Change Watertrap	L	C	Change the watertrap.
	CO2 Watertrap Mismatch	L	C	Check the patient category, replace a matched watertrap.
	CO2 No Watertrap	L	B	Check the watertrap connections.
	CO2 Zero Failed	L	A	Check the CO_2 connections. After the sensor's temperature becomes stabilized, perform a zero calibration again.
	CO2 Module Error	L	C	There is a problem with the CO_2 module, or a problem with the communications between the host and the CO_2 module. Restart the equipment.
CPR sensor	CPR Sensor Err	H	C	There is a self-test error or communication problem with the CPR sensor. Contact your service personnel.
	CPR Sensor Low Battery	M	C	The battery power of the CPR sensor is low. Charge the battery by connect the CPR sensor to the equipment.
	CPR Sensor Need Service	H	C	The compressions using the CPR sensor exceed the expected numbers. Contact your service personnel.
	CPR Sensor Cable Fault	L	C	An error occurred to the CPR sensor cable. Replace the CPR sensor cable.
	Change CPR Sensor Battery	L	C	The CPR sensor battery is aging. Contact your service personnel.
	CPR Sensor Bat. Charge Err	L	C	The CPR sensor cannot be charged. Contact your service personnel.
Main control system	No Speaker	L	C	Make sure that the speaker is connected.
	Power Board Comm Err	H	C	An error occurred to the power board, or there is a problem with the communications between the power board and the host. Restart the equipment.
	Keyboard Comm Err	L	C	An error occurred to the keypad board, or there is a problem with the communications between the keypad board and the host. Restart the equipment.
	Therapy Module Comm Err	S	C	An error occurred to the therapy module, or there is a problem with the communications between the therapy module and the host. Restart the equipment. If the problem persists, contact your service personnel.
	Main Control Selftest Err	H	C	The main control voltage is abnormal. Replace the main control board.
	Wifi Module Fault	L	C	Contact your service personnel.
	Machine Type Error	H	C	
	RT Clock Need Reset	L	C	Reset system time.
	RT Clock Err	H	C	An error occurred to the RTC chip, or the button cell is depleted. Replace corresponding part.

Measurement	Alarm Message	L	I	Cause and solution
Main control system	Memory Err	L	C	There is a problem with the data card. Format the CF card. If the problem persists, contact your service personnel.
	Last User Test Failed	L	C	Run a successful user test.
	Last Auto Test Failed	L	C	Run a successful user test again.
	No CMS	L	C	The equipment is disconnected from the CMS. Check the network connection.
	IP Address Conflict	L	C	Network IP conflicts. Check the network settings.
Power board	Power System Selftest Err	H	C	An error occurred to the system power supply. Restart the equipment.
	Power Board Volt Err	L	C	
	Low Battery	S	C	Change battery or connect the equipment to the AC power source to charge the batteries.
	No Battery	L	C	Battery is not installed. Install the battery.
	Battery Depleted! System will shut shown imminently. Connect to AC Mains or Replace Battery.	S	C	Connect the equipment to AC mains.
	Battery Err	H	C	There is a problem with the batteries. Check the batteries for damage; verify that correct batteries are used. Replace the batteries if necessary.
	Battery Aged	L	C	Replace the battery.
	Battery failed charging	M	C	Battery failure or power board hardware failure. Replace the battery. If the problem persists, contact your service personnel.
Therapy module	Therapy Equip selftest Err	S	C	An error occurred during therapy module self test. Restart the equipment or replace the therapy module low voltage board.
	Defib Malfunction	S	C	The defibrillation function fails or both the defibrillation and pacing functions fail. Restart the equipment and test defibrillation function. If the problem persists, contact your service personnel.
	Pacer Malfunction!	S	C	The pacing function fails. Restart the equipment and test pacer function. If the problem persists, contact your service personnel.
	Disarming Failed	H	C	There is a problem with the therapy module disarming circuit. Replace the therapy module low voltage board and high voltage board.
Monitoring module	Monitor Module Selftest Err	H	C	An error occurred during MPM module power-on self test. Replace the MPM module.
	Mornitor Module Reset Err	H	C	MPM module reset abnormally. In this case, the MPM module restores to default configuration. You can ignore this problem.
	Monitor Module Voltage Err	L	C	The voltage of MPM module is abnormal. Replace the MPM module.
Recorder	Recorder Init Err	L	A	Restart the equipment.
	Recordhead Overheated	L	A	The recorder has been working for a prolonged time. Clear the recording tasks and resume the recording till the recorder's print head cools down.
	Recorder Overcurrent	L	A	Re-load the recorder paper.

Measurement	Alarm Message	L	I	Cause and solution
Pacer	Pads cable Off	H	C	Check that pads cable is properly connected.
	Pads Off	H	C	Check that pads are properly connected.
	ECG Lead Off	H	C	Check that ECG leadwires are properly connected.
	Pacer Stopped Abnormally	H	C	Check paddles. Check that pads well contact with patient's skin. Make sure pads are properly applied, and then start pacing again.
Others	Load Config Err	L	A	Check if the configuration is correct, or restore the factory configuration.

Note: In the "L" column "S" refers to special technological alarm. The special technological alarms cannot be paused or silenced, and the alarm volume is unchangeable. These alarms stops only when the alarm condition is eliminated.

A.5.3 Resp Specifications

Technique	Trans-thoracic impedance
Measurement range	0 to 200 rpm
Resolution	1 rpm
Accuracy	121 to 200 rpm: ±2 rpm 0 to 120 rpm: ±1 rpm
Respiration excitation waveform	<300 μA, sinusoid, 62.8 kHz (±10%)
Minimum respiration impedance threshold	0.3Ω with× 5 gain
Bandwidth	0.2 to 2.5 Hz (-3 dB)
Reference impedance range	2200 to 4500Ω, using an ECG cable with 1 kΩ resistor
Apnea alarm time	10 s, 15 s, 20 s, 25 s, 30 s, 35 s, 40 s

A.5.4 SpO_2 Specifications

Mindray SpO_2 Module

Standard	Meet standards of ISO 80601-2-61
Measurement range	0 to 100%
Resolution	1%
Response time	<20 s (SpO_2 value sudden changes from 70% to 100%)
Accuracy*	70 to 100%: ±2% (in adult/pediatric mode) 70 to 100%: ±3% (in neonate mode) 0% to 69%: Not specified
Refreshing rate	≤2 s
*Measurement accuracy verification: The SpO_2 accuracy has been verified in human experiments by comparing with arterial blood sample reference measured with a CO-oximeter. Pulse oximeter measurements are statistically distributed and about two-thirds of the measurements are expected to come within the specified accuracy range compared to CO-oximeter measurements.	

Masimo SpO_2 Module

Standard	Meet standards of ISO 80601-2-61
Measurement range	1 to 100%
Resolution	1%
Response time	≤20 s (SpO_2 value sudden changes from 70% to 100%)
Accuracy[1]	70 to 100%: ±2% (measured without motion in adult/ pediatric mode) 70 to 100%: ±3% (measured without motion in neonate mode) 70 to 100%: ±3% (measured with motion) 1% to 69%: Not specified
Refreshing rate	≤2 s
SpO_2 averaging time	2-4 s, 4-6 s, 8 s, 10 s, 12 s, 14 s, 16 s

[1] The Masimo pulse oximeter with sensors have been validated for no motion accuracy in human blood studies on healthy adult volunteers in induced hypoxia studies in the range of 70% to 100% SpO2 against a laboratory co-oximeter and ECG monitor. This variation equals plus or minus one standard deviation. Plus or minus one standard deviation encompasses 68% of the population. One percent was added to the accuracies for neonatal sensors to account for accuracy variation due to properties of fetal hemoglobin.

The Masimo pulse oximeter with sensors has been validated for motion accuracy in human blood studies on healthy adult volunteers in induced hypoxia studies while performing rubbing and tapping motions at 2 to 4 Hz. At an amplitude of 1 to 2 cm and non-repetitive motion between 1 to 5 Hz. At an amplitude of 2 to 3 cm in induced hypoxia studies in the range of 70% to 100% SpO2 against a laboratory co-oximeter and ECG monitor. This variation equals plus or minus one standard deviation. Plus or minus one standard deviation encompasses 68% of the population.

[2] The Masimo pulse oximeter has been validated for low perfusion accuracy in bench top testing against a Biotek Index 2 simulator and Masimo's simulator with signal strengths of greater than 0.02% and a % transmission of greater than 5% for saturations ranging from 70 to 100%. This variation equals plus or minus one standard deviation. Plus or minus one standard deviation encompasses 68% of the population.

Nellcor SpO_2 Module

Standard	Meet standards of ISO 80601-2-61	
Measurement range	0 to 100%	
Resolution	1%	
Accuracy	70 to 100%: 70 to 100%: 0% to 69%:	±2% (in adult/pediatric mode) ±3% (in neonate mode) Not specified
Refreshing rate	≤2 s	

A.5.5 PR Specifications

PR from Mindray SpO_2 Module

Measurement range	20 to 300 bpm
Resolution	1 bpm
Accuracy	±3 bpm
Response time	<20 s (PR value sudden changes from 25 to 240 bpm)

PR from Masimo SpO_2 Module

Measurement range	25 to 240 bpm
Accuracy	±3 bpm (measured without motion) ±5 bpm (measured with motion)
Response time	≤20 s (PR value sudden changes from 25 to 220 bpm)

PR from Nellcor SpO_2 Module

Measurement range	20 to 300 bpm
Resolution	1 bpm
Accuracy	±3 bpm (20 to 250 bpm) Not specified (251 to 300 bpm)

A.5.6 NIBP Specifications

Standards	Meet standard of IEC 80601-2-30
Technique	Oscillometry
Mode of operation	Manual, Auto and STAT

Auto mode repetition intervals	1, 2, 2.5, 3, 5, 10, 15, 20, 30, 60, 90, 120, 180, 240 or 480 min				
STAT mode cycle time	5 min				
Static pressure measurement range	0mmHg to 300mmHg				
Static pressure measurement accuracy	±3mmHg				
Maximum measurement time	Adult, Pediatric: 180s Neonate: 90s				
Initial cuff inflation pressure range	Adult: 80 to 280 mmHg Pediatric: 80 to 210 mmHg Neonate: 60 to 140 mmHg				
Default Initial cuff inflation pressure	Adult: 160 mmHg Pediatric: 140 mmHg Neonate: 90 mmHg				
Measurement range			Adult	Pediatric	Neonate
	Systolic	mmHg	25 to 290	25 to 240	25 to 140
	Diastolic	mmHg	10 to 250	10 to 200	10 to 115
	Mean	mmHg	15 to 260	15 to 215	15 to 125
Software overpressure protection	Adult: 297±3 mmHg Pediatric: 297±3 mmHg Neonate: 147±3 mmHg				
Measurement accuracy*	Max mean error: ±5 mmHg Max standard deviation: 8 mmHg				
Resolution	1 mmHg				

*Measurement accuracy verification: In adult and pediatric modes, the blood pressure measurements measured with this device are in compliance with the Standard for Non-invasive sphygmomanometers (ISO 81060-2)in terms of mean error and stardard deviation by comparing with intra-arterial or auscultatory measurements (depending on the configuration) in a typical patient population. For auscultatory reference, the 5th Korotkoff sound was used to determine the diastolic pressure.

In neonatal mode, the blood pressure measurements measured with this device are in compliance with the American National Standard for Non-invasive sphygmomanometers (ISO 81060-2) in terms of mean error and stardard deviation by comparing with intra-arterial measurements (depending on the configuration) in a typical patient population.

A.5.7 CO_2 Specifications

Measurement range	0 to 150 mmHg
Accuracy*	Full accuracy mode: 0 to 40 mmHg: ±2 mmHg 41 to 76 mmHg: ±5% of reading 77 to 99 mmHg: ±10% of reading 100 to 150 mmHg: ±(3 mmHg+8% of reading) ISO accuracy mode: Add ±2mmHg to the full accuracy mode
Sart-up time	20 s (typical), 90 s (maximum)
Accuracy drift	Meets the requirement for measurement accuracy within 6 hours.
Resolution	1mmHg
Sample flowrate	Connecting the Oridion sampling line: 50 ml/min

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Accessories and Consumables

CATALOGUE 2022.07

www.mindray.com

P/N:ENG-Accessories and Consumables Catalogue-210210X142P-20220728

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Welcome to the Mindray Accessories Catalogue

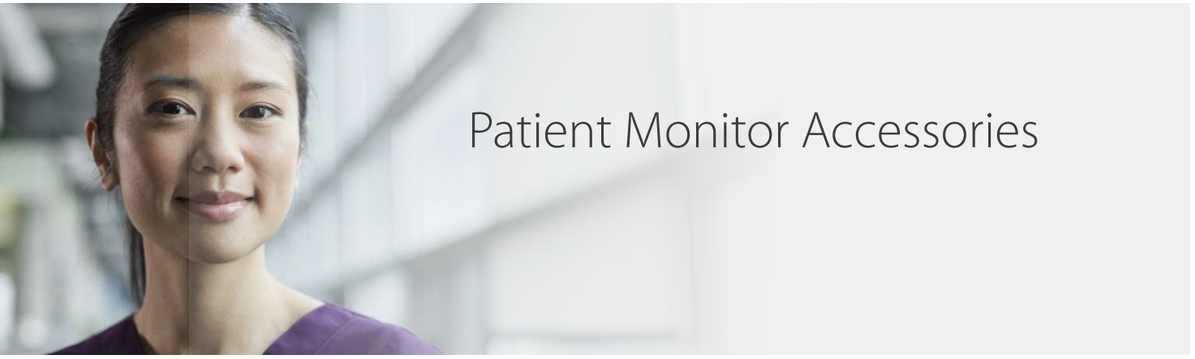
This catalogue will provide you with the parts and accessories that connect to your Mindray Patient Monitor, Electrocardiograph, Defibrillator. Each Mindray product is the product of a special brand of patient focused, clinician-friendly design. For this reason, you can expect the same service, focus and quality with our parts and accessories.

Finding the Right Part

This catalog has been designed to make finding the right part easy. Chapters are organized by specific parameter categories. Simply locate the type of part you are looking for under the appropriate category.

Note:

This catalog is not an Operating Instructions Manual. This catalog will assist you in identifying the correct parts and accessories to connect to your Mindray product, please refer to the Operating Instructions Manual. Warnings, Precautions and Notes can also be found in the Operating Instructions.



Patient Monitor Accessories

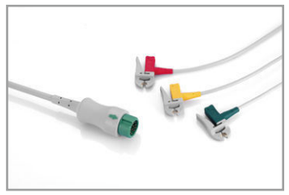
ECG Accessories

Integrated ECG Cable

- Integrated design, convenient for use and maintenance
- Meeting the requirements of EC53
- Outstanding shielding property and anti-interference performance, protecting ECG signal from being interfered
- Excellent defibrillation-proof performance, well protecting the equipment
- Flexible and durable cables
- Outstanding cable material, enduring repeated cleaning and disinfection
- Latex free

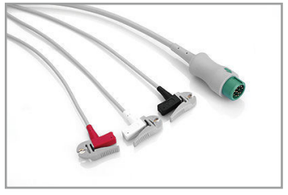
Integrated ECG Cables - IEC

For BeneVision, BeneView, ePM, iPM, uMEC, iMEC series monitors, BeneHeart defibrillator, uMED 20

Picture	Model	Part No.	No. Description	Purchasing Unit
	EA6252B	040-000963-00	ECG cable and wires (integrative): Adu/Ped, 12 Pin 5-Lead, Defib-Proof, IEC, Snap, 3.6 m	Each
	EA6232B	040-000967-00	ECG cable and wires (integrative): Adu/Ped, 12 Pin 3-Lead, Defib-Proof, IEC, Snap, 3.6 m	Each
	EA6252A	040-000962-00	ECG cable and wires (integrative): Adu/Ped, 12 Pin 5-Lead, Defib-Proof, IEC, Clip, 3.6 m	Each
	EA6232A	040-000966-00	ECG cable and wires (integrative): Adu/Ped, 12 Pin 3-Lead, Defib-Proof, IEC, Clip, 3.6 m	Each

Integrated ECG Cables - AHA

For BeneVision, BeneView, ePM, iPM, uMEC, iMEC series monitors, BeneHeart defibrillator, uMED 20

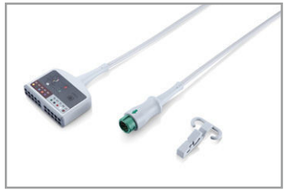
Picture	Model	Part No.	No. Description	Purchasing Unit
	EA6251B	040-000961-00	ECG cable and wires (integrative): Adu/Ped, 12 Pin 5-Lead, Defib-Proof, AHA, Snap, 3.6 m	Each
	EA6231B	040-000965-00	ECG cable and wires (integrative): Adu/Ped, 12 Pin 3-Lead, Defib-Proof, AHA, Snap, 3.6 m	Each
	EA6251A	040-000960-00	ECG cable and wires (integrative): Adu/Ped, 12 Pin 5-Lead, Defib-Proof, AHA, Clip, 3.6 m	Each
	EA6231A	040-000964-00	ECG cable and wires (integrative): Adu/Ped, 12 Pin 3-Lead, Defib-Proof, AHA, Clip, 3.6 m	Each

Trunk Cables

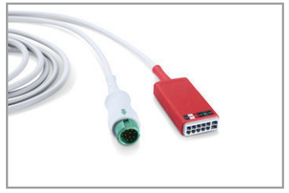
- Easy to replace leadwires
- Meeting the requirements of EC53
- Outstanding shielding property and anti-interference performance, protecting ECG signal from being interfered
- Excellent defibrillation-proof performance, well protecting the equipment
- ESU-proof, ensuring ECG signals not interfered during operation Flexible and durable cables
- Outstanding cable material, enduring repeated cleaning and disinfection
- Latex free

For BeneVision, BeneView, ePM, iPM, uMEC, iMEC series monitors, BeneHeart defibrillator, uMED 20

Picture	Model	Part No.	No. Description	Purchasing Unit
	EV6201	0010-30-42719 (009-004728-00)	ECG trunk cable: 3/5-lead, Adu/Ped, 12 Pin, Defib-Proof, AHA/IEC, 3 m	Each
	EV6211	0010-30-42723	ECG trunk cable: 3/5-lead, Adu/Ped, 12 Pin, ESU-Proof, AHA/IEC, 3 m	Each
	EV6202	0010-30-42720	ECG trunk cable: 3-lead, Ped/Neo, 12 Pin, Defib-Proof, AHA/IEC, 3 m	Each

Picture	Model	Part No.	No. Description	Purchasing Unit
	EV6212	0010-30-42724	ECG trunk cable: 3-lead, Ped/Neo, 12 Pin, ESU-Proof, AHA/IEC, 3 m	Each
	EV6203	0010-30-42721	ECG trunk cable: 12-lead, Adu/Ped, 12 Pin, Defib-Proof, AHA, 3 m	Each
	EV6204	0010-30-42722	ECG trunk cable: 12-lead, Adu/Ped, 12 Pin, Defib-Proof, IEC, 3 m	Each
	EV6222	040-000754-00	ECG Trunk Cable, 3-lead, Ped/Neo, 12 Pin, TPU, Defib-Proof, AHA/IEC, 3 m	Each

For BeneVision, ePM series monitors

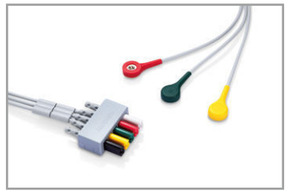
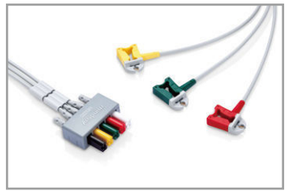
Picture	Model	Part No.	No. Description	Purchasing Unit
	EV6206	009-005266-00	ECG trunk cable: 3/5/6-lead, Adu/Ped, Defib-proof, 12 Pin, 3.1m, AHA/IEC	Each
	EV6216	009-005268-00	ECG trunk cable: 3/5/6-lead, Adu/Ped, ESU-proof, 12 Pin, 3.1m, AHA/IEC	Each

ECG Leadwires – IEC

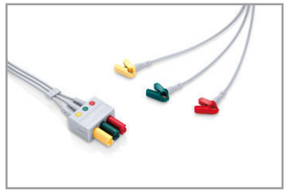
- Easy to replace trunk cables
- Meeting the requirements of EC53
- Outstanding shielding property and anti-interference performance, protecting ECG signal from being interfered
- Flexible and durable cables
- Outstanding cable material, enduring repeated cleaning and disinfection
- Latex free

Match with 3/5-lead cables (0010-30-42719, 0010-30-42723)

Picture	Model	Part No.	No. Description	Purchasing Unit
	EL6502A	0010-30-42728	5-Lead ECG wires, Clip, Adu, TPU, IEC, 0.6 m/1m	Each
	EL6504A	0010-30-42730	5-Lead ECG wires, Clip, Adu/Ped, TPU, IEC, long, 1m/1.4 m	Each
	EL6502B	0010-30-42736 (009-004730-00)	5-Lead ECG wires, Snap, Adu, TPU, IEC, 1m/1.4 m	Each

Picture	Model	Part No.	No. Description	Purchasing Unit
	EL6308B	0010-30-42733	3-Lead ECG wires, Snap, Adu/Ped, TPU, IEC, 1m	Each
	EL6304A	0010-30-42732	3-Lead ECG wires, Clip, Adu/Ped, TPU, IEC, 1m	Each

Match with 3-lead cables (0010-30-42720, 0010-30-42724)

Picture	Model	Part No.	No. Description	Purchasing Unit
	EL6306A	0010-30-42897	3-Lead ECG wires, Clip, Neo, TPU, IEC, 1m	Each

Electrode

- Latex free
- DEHP free
- Good biocompatibility, avoiding allergic reactions to patient

Picture	Model	Part No.	No. Description	Purchasing Unit
	31499224	0010-10-12304	Adult ECG Electrode (Kendall, Medi Trace 210)	10 pcs/pouch
	H124SG	900E-10-04880	Neonatal ECG Electrode (Kendall, H124SG)	50pcs/pouch
		040-002711-00	Adult ECG electrode (INTCO)	5 pcs/pouch

Picture	Model	Part No.	No. Description	Purchasing Unit
		040-002833-00	Pediatric/Neonatal ECG electrode (INTCO)	30 pcs/pouch

Match with 3-lead Neonatal cables (040-000754-00)

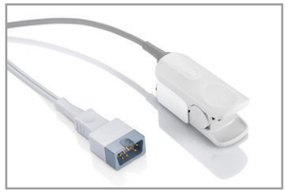
Picture	Model	Part No.	No. Description	Purchasing Unit
	0406062	040-003254-00	Disposable neonatal 3-lead pre-wired electrode, radio translucent, AHA, 60 cm	50 pouch/box (3 pcs/pouch)

Mindray SpO_2 Sensor

Finger-Clip Sensor (Reusable)

- Ergonomic design, precise engineering and clinical testing guaranteeing reliable measurement
- High quality photoelectric element, ensuring precise measurement
- Well anti-electromagnetic interference, suitable for complex electrical environment
- Perfect performance against light interference, can be used in environment of strong light
- ESU-proof, ensuring SpO_2 signals not interfered during operation
- Strict electric safety specification, guaranteeing safety for use
- Few pit structure, not easily staining, convenient for cleaning
- Outstanding cable jacket, enduring repeated cleaning and disinfection
- Latex free
- Good biocompatibility, avoiding allergic reactions to patient

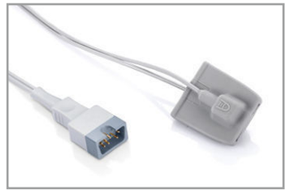
For all Mindray SpO_2 Cables and PM-50/60 pulse oximeter

Picture	Model	Part No.	No. Description	Purchasing Unit
	512F	512F-30-28263	Reusable sensor, adult, finger-clip, 1.1 m, >30 kg	Each
	512H	512H-30-79061	Reusable sensor, pediatric, finger-clip, 1.1 m, 10-30 kg	Each

Finger-Tip Sensor (Reusable)

- Ergonomic design, precise engineering and clinical testing guaranteeing reliable measurement
- High quality photoelectric element, ensuring precise measurement
- Well anti-electromagnetic interference, suitable for complex electrical environment
- Perfect performance against light interference, can be used in environment of strong light
- ESU-proof, ensuring SpO_2 signals not interfered during operation
- Strict electric safety specification, guaranteeing safety for use
- Silicone rubber sheath, not likely to break in case of drop, hardly sensor off
- Few pit structure, not likely staining, convenient for cleaning
- Outstanding cable jacket, enduring repeated cleaning and disinfection
- Latex free
- Good biocompatibility, avoiding allergic reactions to patient

For all Mindray SpO_2 Cables and PM-50/60 pulse oximeter

Picture	Model	Part No.	No. Description	Purchasing Unit
	512E	512E-30-90390	Reusable sensor, adult, finger-tip, 1.1 m, >30 kg	Each
	512G	512G-30-90607	Reusable sensor, pediatric, finger-tip, 1.2 m, 10-30 kg	Each

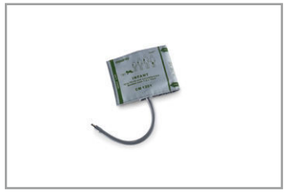
Adapted with the tubing (6200-30-09688, 115-012522-00, 040-002712-00)

Picture	Model	Part No.	No. Description	Purchasing Unit
	CM1905	040-000688-00	NIBP Cuff Tubing Adapter (Adult tubing to Neonate cuff)	Each

CM1200 Series

- Soft and comfortable. Low hazard to skin even if a long-term use
- Easy to clean. The cuff wrap can not be damped or stained by liquid if duly cleaned
- Pilling-proof. Not deform even if for long-term use
- TPU bladder ensures good air tightness and long life
- Latex free, PVC free
- Good biocompatibility, free from biological hazard to skin

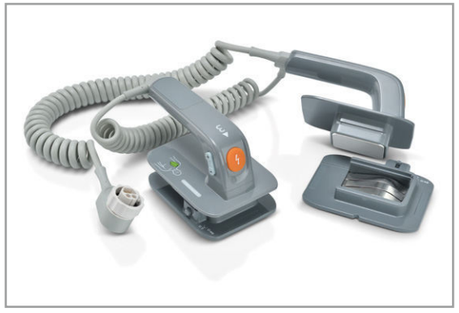
Connected with the tubing 6200-30-09688, 115-012522-00 and 040-002712-00

Picture	Model	Part No.	No. Description	Purchasing Unit
	CM1200	115-002480-00	Reusable cuff, Small Inf, 7-13 cm	Each
	CM1201	0010-30-12157	Reusable cuff, Inf, 10-19 cm, with connector	Each

Picture	Model	Part No.	No. Description	Purchasing Unit
	CM1202	0010-30-12158	Reusable cuff, Child, 18-26 cm, with connector	Each
	CM1203	0010-30-12159	Reusable cuff, Adu, 25-35 cm, with connector	Each
	CM1204	0010-30-12160	Reusable cuff, Large Adu, 33-47 cm, with connector	Each
	CM1205	0010-30-12161	Reusable cuff, Thigh, 46-66 cm, with connector	Each

Defibrillator Accessories

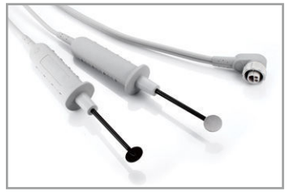
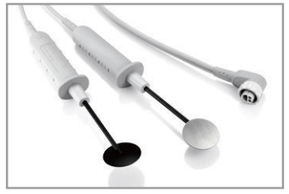
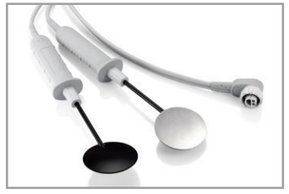
Defibrillator Accessories

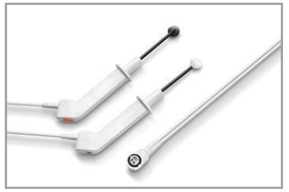
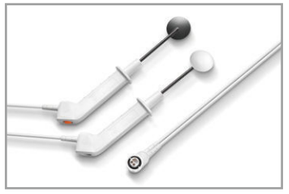
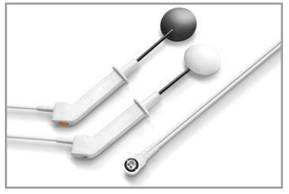


Reusable Internal paddles

- Apply for exposed heart defibrillation in OR during the heart surgery
- Integrate both cable and paddles in one cable
- Offer three paddle sizes to be chosen based on different patient types (1", 2" and 3")
- Auto-identify the paddle connection and reduce the energy level under 50J (default setting is 10J) for internal defibrillation use by uMED 20, BeneHeart D3 and D6
- Autoclavable

For BeneHeart D6/D3/uMED 20

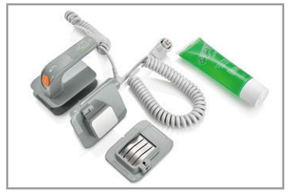
Picture	Model	Part No.	No. Description	Purchasing Unit
		115-018366-00	Internal paddles, without shock button, 1 inch	Each
		115-018367-00	Internal paddles, without shock button, 2 inch	Each
		115-018368-00	Internal paddles, without shock button, 3 inch	Each

Picture	Model	Part No.	No. Description	Purchasing Unit
		125-000166-00	Internal paddles, with shock button, 1 inch	Each
		125-000167-00	Internal paddles, with shock button, 2 inch	Each
		125-000168-00	Internal paddles, with shock button, 3 inch	Each

External Paddles and Cables

- Applicable for both adults and pediatric patients, and easy to switch
- Safe for defibrillation energy delivery
- Patient contact indicator (PCI) makes it more convenient for medical staff to check the patient's contact status
- Space-saving spiral cable, flexible and durable
- Outstanding cable material, enduring repeated cleaning and disinfection
- Latex free

For BeneHeart D6/D3/uMED 20

Picture	Model	Part No.	No. Description	Purchasing Unit
		0651-30-77114	External paddles kit, Adu/Ped, PCI, with conductive gel (250 g)_D3 D6	Each
		125-000135-00	External paddles kit, Adu/Ped, PCI, with conductive gel (250 g)_uMED 20	Each

Pads Cable

- High voltage resistance and high safety
- Flexible and durable cables
- Outstanding cable material enduring repeated cleaning and disinfection

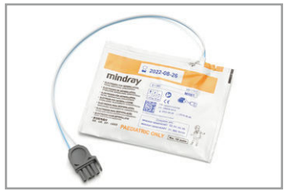
For BeneHeart D6/D3/uMED 20

Picture	Model	Part No.	No. Description	Purchasing Unit
	MR6702	040-000545-00	Cable of electrode pads with test load (50 ohm)	Each

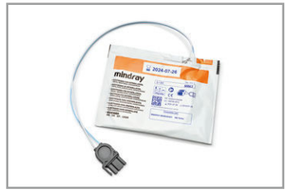
Multifunctional Pads

- Two models for either adult or pediatric
- Multifunctional for defibrillation, pacing, and ECG monitoring
- Wide applicable temperature scope
- Highly adhesive
- Outstanding cable material enduring repeated cleaning and disinfection
- Disposable after use, and no pollution to the environment

For BeneHeart D6/D3/D1/uMED 20

Picture	Model	Part No.	No. Description	Purchasing Unit
	MR60	0651-30-77007	Defibrillator disposable pads (Adu/Ped, without auto-identification, radiolucent), cable length 1.2 m, preconnectable (0.45 m cable out-of-pouch)	5pcs/box
	MR61	0651-30-77008	Defibrillator disposable pads (Ped, without auto-identification), cable length 1.2 m, preconnectable (0.45 m cable out-of-pouch)	5pcs/box

For BeneHeart D1

Picture	Model	Part No.	No. Description	Purchasing Unit
	MR62	115-035426-00	AED disposable pads (Adu/Ped, with auto-identification), cable length 1.2 m, preconnectable (0.45 m cable out-of-pouch)	5pcs/box
	MR63	115-035427-00	AED disposable pads (Ped, with auto-identification), cable length 1.2 m, preconnectable (0.45 m cable out-of-pouch)	5pcs/box

Test Load

- Used to test the performance of the main unit and multifunctional cable
- High reliability and safety

For BeneHeart D6/D3/uMED 20

Picture	Model	Part No.	No. Description	Purchasing Unit
	MR6905	040-000413-00	Test load (for use with the cable of electrode pads)	Each

CPR Sensor

For BeneHeart D6/D3/D1

Picture	Model	Part No.	No. Description	Purchasing Unit
		115-044836-00	CPR sensor kit (with battery, not for D1) , Including: CPR sensor with battery CPR sensor cable Disposable CPR sensor adhesive tape, 3 pcs	Each
		115-044871-00	CPR sensor kit (without battery) Including: CPR sensor without battery CPR sensor cable Disposable CPR sensor adhesive tape, 3 pcs	Each
		040-003123-00	Disposable CPR sensor adhesive tape	3 pcs/pack

Carrying Case

- Carrying a defibrillator for pre-hospital or field emergency treatment
- Two models for either adult or pediatric
- High safety coefficient in load bearing
- High applicability in extreme environments
- Outstanding material enduring repeated cleaning and disinfection

Picture	Model	Part No.	No. Description	Purchasing Unit
		115-018610-00	Carry case_D3	Each
		125-000022-00	Carry case_D6	Each
		115-023421-00	Carry case_D1	Each

Picture	Model	Part No.	No. Description	Purchasing Unit
		048-004292-00	Rescue kit	Each
		125-000023-00	Upper pouch_D3	Each
		115-008543-00	Upper pouch_D6	Each
		115-008708-00	Back pouch_D3	Each

Conductive Gel

Picture	Model	Part No.	No. Description	Purchasing Unit
	15-25	0000-10-10775	Conductive gel, 250 g	Each

Battery Charger

Picture	Model	Part No.	No. Description	Purchasing Unit
		115-009187-00	External Li-ion battery charger +1 power cord (GB)	Each
		115-009188-00	External Li-ion battery charger +1 power cord (US)	Each
		115-009189-00	External Li-ion battery charger +1 power cord (India)	Each
		115-009190-00	External Li-ion battery charger +1 power cord (EU)	Each
		115-009191-00	External Li-ion battery charger +1 power cord (Brazil)	Each
		115-009192-00	External Li-ion battery charger +1 power cord (UK)	Each
		115-025630-00	External Li-ion battery charger +1 power cord (Australia)	Each
		115-033660-00	External Li-ion battery charger +1 power cord (Swiss)	Each
		009-001687-00	DC power input cable for external charger, cigarette-lighter plug	Each
		115-013411-00	Mounting plate of external charger	Each

Thermal Paper

Picture	Model	Part No.	No. Description	Purchasing Unit
		A30-000001---	Thermal paper (50mmx20m)	Each
		M002-10-69954	Thermal paper (80mmx20m)	Each

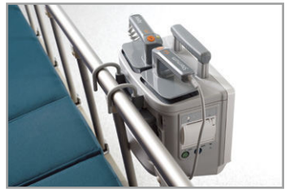
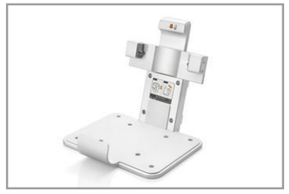
Mobile Trolley

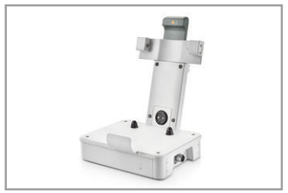
Picture	Model	Part No.	No. Description	Purchasing Unit
		115-015823-00	Mobile trolley kit for D6 Including: Mounting for D6 Trolley for D3/D6	Each
		115-015825-00	Mobile trolley kit for D3 Including: Mounting for D3 Trolley for D3/D6	Each

Cabinet

Picture	Model	Part No.	No. Description	Purchasing Unit
		045-001140-00	AED cabinet (with mounting kit, lock and alarm)	Each

Mounting

Picture	Model	Part No.	No. Description	Purchasing Unit
		115-007587-00	Bedrail hook_D3	Each
		115-051797-00	Bedrail hook_D6	Each
		115-013412-00	Table mounting kit_D3	Each
		115-066638-00	Vehicle mounting kit_D3	Each
		115-005061-00	Vehicle mounting kit_D6	Each

Picture	Model	Part No.	No. Description	Purchasing Unit
		115-030528-00	D6 vehicle dock station CE, DC power input connector, with cigarette DC power cable	Each
		115-030529-00	D6 vehicle dock station CE, AC power input connector, without AC power cable	Each

Others

For BeneHeart D6/D3/D1/uMED 20

Part No.	No. Description	Purchasing Unit
0651-30-77145	Data output software package (software CD, installation guide)	Each
009-008523-00	Defib Sync cable_D3 D6	Each
0651-20-77046	Defib Sync cable_uMED 20	Each
009-008524-00	Analog output cable_D3 D6	Each
0651-20-77122	Analog output cable_uMED 20	Each
0010-30-12471	DC/AC adapter_D3 D6	Each
115-067930-00	Wi-Fi to 4G router kit_D3 D6	Each