

 ortivus

# **MobiMed**

Life

**REANIBEX 800** DEFIBRILLATOR



## SAVING VITAL SECONDS

With over 30 years' experience in cardiology and in close collaboration with our users, Ortivus has developed MobiMed, the leading solution for patient monitoring and record keeping in prehospital care. With MobiMed, ambulance personnel can monitor and treat the patient out in the field, while patient data and vital parameters are shared in real time throughout the care chain. MobiMed Life – a part of MobiMed, is a stand-alone defibrillation solution that can be tailored to the organisation's needs.

Bexen Cardio has with its long experience developed Reanibex 800, a compact, user-friendly and intuitive defibrillator with clear voice instructions and guiding icons via display. CPR assistance is offered in real time with the help of a metronome, representation of compression speed and compression depth. Reanibex 800 is created to withstand tough conditions with minimal maintenance.



**Compact, robust and intuitive defibrillator**



**CPR assistance**



**360 Joule**

## HEART SAFE SOLUTIONS

The Reanibex 800 is the only Multi-Parameter Defibrillator Monitor with a plug & play design on the market designed for Advanced Life Support and has four operating modes: Monitor, Manual Defibrillator, AED and Pacemaker.

### Intuitive Design

Easy and intuitive to use, with shortcut keys to select the operating mode and a rotary therapy selector.

### Plug & Play

The Reanibex 800's modules have a built-in plug & amp; play system that allow expansion and updating with new functionalities, without sending the unit to the factory. This ensures that the unit is always available for use.

### Flexible Power Options

NiMH rechargeable battery and AC power supply.

### 360 Joules

Can escalate energy levels up to 360J.

### Saving Vital Seconds

Minimizes CPR interruptions by allowing compressions to continue during energy charging.

### CPR Assistance

Real-time CPR assistance using metronome, compression velocity rendering and compression depth.

### Monitor Capability

Up to 12-lead ECG function, SpO2, SpMet, SpHb, PVI and SpOC, PR, EtCO2, NIBP, IBP and Temperature.

### Non-Invasive Pacemaker

Pacemaker pulses are delivered using only disposable multifunction electrodes, both adult and paediatric.

### Internal & External Paddles

Adult and paediatric external paddles with defibrillator and printer control from the paddles, and contact indicator. Disposable internal paddles.

### Large Display

User-friendly and intuitive, with clear high-resolution 8.4-inch color display for patient monitoring. The screen can be set to high contrast mode.

### Compatible Technology

Electrodes are fully compatible with all other MobiMed Life defibrillators and monitors.

### Customisable

Voice messages, CPRS settings, languages, defibrillation protocols, etc. can be customised via configuration tools.

### Self-tests

The defibrillator performs regular and automatic self-tests to ensure functionality and facilitate maintenance.

### ERC/AHA - Guidelines

Configured according to ERC / AHA guidelines

**“ The Reanibex 800 has a revolutionary system that allows the defibrillator/monitor to be adapted and customised to the user's needs at any time. ”**



## OVERVIEW

1. Communication (Reanibex Data Manager, DataLink, DataCloud).
2. Plug & Play - Modular and easy to upgrade.
3. Connector for ECG, 4+6 lead cable
4. External spatulas with contact indicator
5. Status indicator
6. Rechargeable battery and AC power supply
7. Defibrillation button
8. Charging button
9. Therapy Choice; AED, Manual, Monitor and Pacing.
10. Printer, 50mm or 106mm.



# TECHNICAL SPECIFICATION

## REANIBEX 800 DEFIBRILLATOR

### General

**Dimensions:** 350mm(W) x 260mm(D) x 300mm(H)

**Weight:** Equipment with AC power supply: 6,5 kg, External paddles: 0,95 kg, Battery: 0,70 kg, AC power supply: 0,60 kg

### Defibrillator

**Waveform:** Biphasic truncated exponential adjusted to the impedance of the patient.

**Energy delivery:** By means of reusable external paddles for adults (integrated pediatric paddles), or multifunction disposable electrodes.

**Output energy accuracy:**  $\pm 15\%$  or  $\pm 3$  Joules, the highest, over the range.

**Charging Time:** Less than 5 seconds at 200 Joules with a new fully charged battery. Less than 7 seconds at 360 Joules with a new fully charged battery.

**Range of patient impedances:** 15 to 200 Ohms

### Manual Mode

**Selectable energy levels:** 1 - 10, 15, 20, 30, 50, 70, 100, 125, 150, 175, 200, 250, 300 - 360 Joules.

**Synchronized cardioversion:** SYNC key on the front panel

**Indicators:** Text and audible messages, audible alerts, status indicator, battery indicator, synchronisation mode, equipment connected to external power source indicator.

**CPR Help:** Metronome with compressions rate feedback in real time.

**Available energy indicators:** Charging tone, available energy tone, flashing discharge button, indication of energy level on the screen.

### AED Mode

**Selectable energy levels:** *Adult patient:* from 150 to 360 Joules, *pediatric patient:* from 40 to 90 Joules.

**Audible and on screen messages:** They guide the user through the operating protocol.

**Available energy indicators:** Charging tone, available energy tone, flashing discharge button, message and icon on screen.

**Indicators:** Text and audible messages, audible alerts, status indicator, battery indicator, equipment

connected to external power source indicator.

**CPR Help:** Metronome with compressions rate feedback in real time

**Defibrillable rhythms:** Ventricular fibrillations and rapid ventricular tachycardia.

**Specificity and sensitivity of the detection algorithm:** Fulfils AHA requirements.

**Resuscitation guidelines:** Factory set Guidelines 2015 (ERC/AHA) and its review of 2017.

### ECG Monitor

**Inputs:** Up to 4 waveforms can be viewed on the screen. 12 ECG waveforms can be viewed simultaneously. 3 - lead patient cable: Leads I, II or III  
5 - lead patient cable: Leads I, II, III, aVF, aVL, aVR and V. 10 - lead patient cable: Leads I, II, III, aVF, aVL, aVR and from V1 to V6. The ECG signal can be obtained through reusable external paddles, or disposable multifunction electrodes

**Sensitivity:** 2.5, 5, 10, 20, 40 mm/mV & auto-gain.

**Heart Rate:** From 30 to 300 bpm (accuracy  $\pm 10\%$ )

**Common mode rejection:** More than 100 dBs (IEC 60601-2-27)).

**Frequency response:** Mains filter: 50 Hz or 60 Hz  
On recorder: 0,67 – 40 Hz or 1 – 30 Hz or 0,05 – 150 Hz (diagnostic mode). On screen: 0,67 – 40 Hz or 1 – 30 Hz

**Respiration rate:** Possibility of obtaining the respiratory rate from the ECG signal.

**Patient isolation:** ECG: Type CF, SpO2: Type CF, NIBP: Type CF, EtCO2: Type CF, TEMP: Type CF, IP: Type CF, Defibrillator: Type CF

### 12 - Lead ECG and Interpretation

**Input:** With a 10 -lead patient cable the signals obtained are: I, II, III, aVR, aVL, aVF and from V1 to V6. These signals can be printed on the recorder in 3 x 4, 3x4+1R or 3x4 + 3R format

**Analysis algorithm:** Glasgow University algorithm.

**12 - lead transmission:** From the equipment to a PDA and from the PDA to a remote server

### Pacemaker

**Waveform:** Rectangular constant current.

**Pulse width:** 40 ms (precision of  $\pm 10\%$ ).

**Amplitude:** From 0 to 200 mA (accuracy of  $\pm 10\%$ ).

**Frequency:** From 30 a 180 bpm (accuracy of  $\pm 10\%$ ).

**Operating modes:** Fixed and on demand.

**Refractory period:** 340 ms from 30 to 80 bpm, 240 ms from 85 to 180 bpm.

### SpO2 Pulse Oximetry

**Range:** From 0 to 100 %

**Accuracy:** Without movement:  $<2\%$ , With movement:  $<3\%$

**Pulse rate:** From 25 to 240 bpm

**Pulse rate accuracy:** Without movement:  $<3$  bpm, with movement:  $<5$  bpm

**Optional parameters:** SpMet, SpCO, SpHb, PVI and SpOC

### End-tidal Carbon Dioxide

**Range:** From 0 to 99 mmHg

**Resolution:** 1 mmHg (0,1 kPa)

**Accuracy:** Between 0 and 38 mmHg:  $\pm 2$  mmHg. Between 39 and 99 mmHg:  $\pm 5\%$  of the reading + 0,08% every 1 mmHg (above 4 mmHg).

**Sample size:** 50 ml per minute

**Calibration:** Annually or after 4.000 hours of operation.

### Airways Respiration Rate

**Range:** From 0 to 150 breaths/minute (bpm)

**Resolution:** 1 bpm

**Accuracy:** From 0 to 70 bpm:  $\pm 1$  bpm

From 71 to 120 bpm:  $\pm 2$  bpm

From 121 to 150 bpm:  $\pm 3$  bpm

### Non-Invasive Blood Pressure

**Range:** Systolic pressure: 40 - 260 mmHg.

Diastolic pressure: 20 - 200 mmHg.

**Accuracy:** Fulfils the requirements of the ANSI/AAMI SP10:1992 and 2002 standards

**Transducer accuracy:**  $\pm 3$  mmHg between 0 mmHg to 300 mmHg for operating temperature between 0 and 50 °C.

**Initial pressure:** 160 mmHg (by default for *adult patients*) 120 mmHg (by default for *pediatric patients*).

**Pulse rate range:** 30 to 220 bpm

**Pulse rate accuracy:**  $\pm 2\%$  or 3 bpm, the greater.

**Automatic measurement interval:** Configurable from 1 to 60 minutes.

**Measurement time:** Average of 30 seconds, 130 seconds maximum.

**Calibration:** Annually.

### Invasive Pressure

**Transducer sensitivity:** 5 uV/V mmHg

**Sensitivity adjustment range:**  $\pm 10\%$

**Frequency response:** 0-28 Hz (-3 dBs)

**Range:** From -99 to 310 mmHg

**Measurement resolution:**  $\pm 1$  mmHg

**Pulse rate range:** From 30 to 250 bpm

### Temperature

**Range:** From 20,0 °C to 44,0 °C

**Measurement resolution:** 0,1°C

**Measurement accuracy (excluding any adapter cable):** 0,1 °C for an ambient temperature of 10 to 40 °C (temperature probe adds an additional  $\pm 0,1^\circ\text{C}$  for an ambient temperature of 32 to 42 °C).

### Screen

**Size:** 8,4 " (diagonal).

**Type:** TFT Colour.

**Resolution:** 800 x 600 pixels.

**Sweep rate:** 25 mm/sec for the ECG, SpO2 and pressure waveforms, and 6,25 or 12,5 mm/s for the CO2 waveform.

**Display time:** 5,4 seconds for the ECG signal (10,8 seconds in cascade mode).

### Screen

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**Display time:** 5,4 seconds for the ECG signal (10,8 seconds in cascade mode).

### Printer

**Type:** Thermal array

**Paper width:** 50 mm (106 mm optional)

**Speed:** 10, 25 and 50 mm/s (accuracy:  $\pm 5\%$ )

**Operating modes:** *Manual:* Start/stop the printer using the key on the front panel. The ECG trace is printed with all events and measurements.

*Automatic:* The equipment can be configured so that it prints automatically when a marker is introduced, when a discharge is performed or when there is an alarm. *Delay:* Waveforms are printed with a delay of 8 seconds after the screen display.

**Reports:** Operating reports, trends, 12 - leads reports, configuration parameters, last tests results, equipment information and information of the events stored in the memory card.

### Data Storage

**Internal memory:** Stores the operation report and all the parameters monitors up to a maximum of 24 hours from switching on.

**Compact Flash memory card:** Stores the continuous ECG signal with all the events and the audio (only in AED mode). Stores the last 100 along with their associated ECG signal.

**Data review:** PC application (Reanibex Data Manager, Reanibex Data Cloud and Reanibex Data Link) for downloading, reproducing, handling, storing and reviewing recorded episodes (optional).

### Communications (optional)

**GSM:** Built-in GSM module for data transfer

**Bluetooth:** Bluetooth Class 1 radio (range up to 200 meters). Uses 2.4 GHz ISM band.

### Battery

**Type:** NiMH rechargeable 3 A/h 12 V

**Capacity:** More than 150 shocks at 360 Joules with a new fully charged battery at 25°C. More than 190 minutes of ECG monitoring. More than 140 minutes of monitoring with ECG, SpO2, CO2 and NIBP measurement every 15 minutes.

**Recharging time:** Approximately 3 hours.

**Battery indicators:** Capacity and battery status indicator on the screen. Low battery indicator, absence of battery and battery charging on the status indicator.

### Environment

**Operating temperature:** From 0 to 45 °C

**Storage temperature:** From -20 to 60 °C

**Humidity:** 10 to 95 % non-condensing

**Altitude:** 0 to 4000 m

**Shocks:** EN 1789:2007 + A1:2010

**Vibrations:** EN 1789:2007 + A1:2010

**Resistance to solids/water:** IP55

**EMC:** Complies with EN 60601-1-2:2015

**Safety:** Complies with EN 60601-1:2006

**Other aspects:** The equipment is not suitable to be used in the presence of concentrated oxygen

**Operating mode:** Continuous

**AC Supply:** *Input:* 100 - 240 VAC, 50/60 Hz, 2,5 A  
*Output:* 15 V, 9,3 A, max 140 W

**Battery:** 12 V rechargeable NiMH battery

**DC Supply:** 10-16 VDC, 10 A



## MobiMed Life Products

### Defibrillators/Monitors



#### Reanibex 100

REANIBEX 100 is a portable, user-friendly automated external defibrillator (AED) which empowers non-professionals to provide fast, effective first aid treatment to cardiac arrest victims, adults or children.



#### Reanibex 300 AED/MANUAL

The Reanibex 300 is an Automated External Defibrillator (AED) with a colour screen with 3D animated graphics and on-screen ECG signal display. The Reanibex 300 Manual is portable, lightweight, and compact with all the features needed for responding to cardiac arrest situations.



#### Reanibex 500 EMS

The Reanibex 500 EMS is specially designed for advanced monitoring and resuscitation functions, and has four operating modes: Monitor, Manual Defibrillator, Automated Defibrillator and Pacemaker.



#### Reanibex 800

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