

- DEFIBRILLATOR •
- AED •
- PACEMAKER •
- ECG •
- RESPIRATION •
- OXIMETRY •
- NIBP •
- CAPNOGRAPHY •
- PRINTER •
- CPR MAESTRO •

CARDIOMAX 8 SERIES

Biphasic
Defibrillator
Monitor and
Cardioverter



RTC
Real Time Check

Auto **CAS** Sequencing

SIP Sudden
Death
Prevention

biphasic
SHOCK

AVAILABLE PARAMETERS

- Real Time Check Technology (RTC)*
- Automated External Defibrillator Mode (AED)
- Sudden Death Prevention Mode (SDP)
- Cardiopulmonary Resuscitation Accessory (CPR Maestro)*
- Electrocardiogram (ECG) up to 12 derivations*

Complete, advanced, reliable and easy to use: definitely the best investment in emergency equipment.



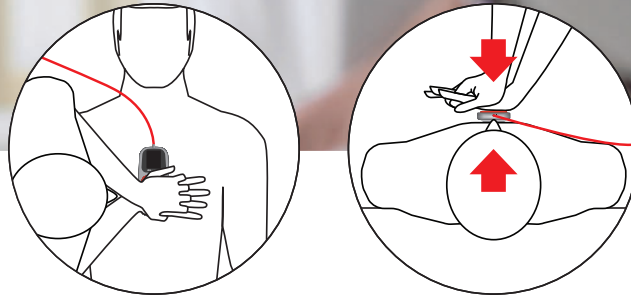
*Some items are optional - Please verify availability.

- Oximetry (SpO₂)*
- Non invasive pacemaker*
- Non-invasive pressure (NIBP)*
- Capnography (EtCO₂)*
- Printer*
- Removable rechargeable battery

THE IDEAL PARTNER FOR YOUR CARDIOMAX

Positioned on the patient's chest, the CPR Maestro provides real-time feedback on the rescuer's performance by guiding him through voice, LCD display and indications on the CardioMax screen about the procedure's optimal frequency, strength and interval.

The result is a much more effective and consistent performance of CPR, resulting not only in increased chances of patient survival, but reducing the occurrence of severe sequelae due to lack of oxygenation.



CARDIOMAX 8 SERIES

PRACTICAL

- Light.
- Ready to use in less than 6 seconds.
- Biphasic power delivery of up to 360 J.
- AED Mode – Automated External Defibrillator.
- CPR Maestro assists in performing cardiopulmonary resuscitation by measuring the frequency and depth of the chest compressions applied (optional).
- Internal battery, easy to replace, allows more than 100 shocks.

EASY TO USE

- Easy to use - All operations centralized on just two buttons.
- Easy operation - 1, 2, 3 standard.
- Quick access to main functions.
- Easy-to-use user interface - automatically adjusts itself to the number of active parameters, presenting clear and organized information.
- Large 8.4" color display.

SMART

- Auto Sequencing Charge function - When enabled, applies charges pre-configured by the user for the first, second and third shocks without the need to change the selector manually.
- Smart monitoring alarms.
- Sudden Death Prevention (SDP) technology. This characteristic allows CardioMax to monitor the patient continually and identify the beginning of a Ventricular Fibrillation or Rapid Ventricular Tachycardia episode.

RELIABLE

- Reliability - Instramed is a brand present in hundreds of medical organizations on more than 60 countries.
- Dependable products developed for the reality of emergency care.
- A wide network of dealers providing sales and parts, along with the factory-certified technical assistance, provides excellent post-sales service.
- With more than 30 years in the business, Instramed is a manufacturer that maintains stock parts and components even for discontinued products.

KNOW MORE ABOUT THIS PRODUCT IN WWW.INSTRAMED.COM.BR

GENERAL SPECIFICATIONS

- **Pads dimensions**
 - 30.0 cm (11.81 in) length.
 - 21.5 cm (8.46 in) depth.
 - 28.0 cm (11.02 in) height..
- **Weight**
 - Device - 5.15 kg (11.35 lbs).
 - Li-Ion battery - 0.60 kg (1.32 lbs).
 - External pads - 0.85 kg (1.87 lbs).
 - Complete set (Li-Ion battery) - 6.60 Kg (15.66 lbs) (except NIBP).
- **Electrical**
 - AC: 100 to 220 VAC, 50/60 Hz.
 - DC external: 11 to 16 VDC.
- **Removable rechargeable battery**
 - Type: Li-Ion, 14.4 VDC 4 A/h.
 - Duration: battery with full charge - 3 hours in monitor mode, without printer, or a minimum of 140 shocks at 360 J or a minimum of 200 shocks at 200 J.
 - Battery full-charge time (when fully depleted): 4h 30min.
 - Type: Li-Ion, 14.4 VDC 6 A/h.
 - Duration: battery with full charge - 6.5 hours in monitor mode, without printer, or a minimum of 250 shocks at 360 J or a minimum of 400 shocks at 200 J.
 - Battery full-charge time (when fully depleted): 7h 20min.
- **Check availability.
- **Memory**
 - Type: Nand Flash.
 - Capacity: 2 Mbytes.
 - Patients stored: >150 patients.
 - ECG: 2 continuous hours of ECG curve recording, when in AED mode.
 - Storage: 15 seconds of ECG when in shock, physiological alarm and panel events.
- **RTC - Real Time Check (Available when equipped with optional Li-ion battery)**
 - Defibrillation self-test, battery level, connected pads, power source connection check. Check is performed 3 times which are set in advance. This information is wirelessly transmitted to a PC with RTC System software installed and within range of the network.

ENVIRONMENTAL SPECIFICATIONS

- **Temperature**
 - Operational: 0 to 50 °C.
 - Storage: -20 to 50 °C.
- **Humidity**
 - Operational: 10 to 95% RH without condensation.
 - Storage: 10 to 95% RH, without condensation.
- **IP rating**
 - IPX1 (standard) or IP44 (optional).

DEFIBRILLATOR

- **Waveform**
 - Biphasic truncated exponential. Waveform parameters adjusted in terms of patient's impedance.
- **Shock application**
 - By means of multifunctional pads (adhesive) or defibrillation pads.

- **Scales for adult/external defibrillation**
 - Scales: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 50, 80, 100, 150, 200, 250, 300 and 360 J (maximum power can be limited to 200 J). Maximum power limited to 50 J for children's pads.
 - Commands: On/Off button, charge, shock, synchronise.
 - Energy selection: selector switch in front panel.
 - Charge command: button in front panel or buttons in external pads.
 - Shock command: button in front panel or buttons in external pads.
 - Synchronized command: sync button in front panel.
- **Charge auto-sequencing**
 - When enabled, it charges power previously set by the user for the first, second and third shocks, with no need to manually adjust the selector.
- **Maximum charge time in maximum energy**
 - < 6 seconds with 90% to 100% of the minimum specified voltage.
 - < 6 seconds with a full charge.
 - < 13 seconds from equipment initialization.
- **Charge indicators**
 - Audio indication of equipment being charged.
 - Audio indication of charge completed.
 - LED on external pads and charge level indicated on display.
- **External pads size**
 - Adult = 10.3 cm x 8.5 cm. Contact area = 81.9 cm².
 - Children = 4.5 cm x 4 cm. Contact area = 18 cm².
- **Cardioversion**
 - < 60 ms.
- **Pads**
 - Adult and child external (included).
 - Adult and child external (optional).
 - Multifunctional for pacemaker, monitoring and defibrillation (optional).
 - Multifunctional extension (optional).

AED MODULE

- **Functional characteristics**
 - Voice instructions, visual indications, CPR instructions, USB 2.0. Multilingual.
- **USB**
 - USB 2.0 for transfer of the electrocardiogram stored in AED mode to a compatible PC.
- **SoftDEA**
 - Software for viewing the data transferred to the PC.
- **Maximum charge time**
 - 50 J: 2 seconds.
 - 150 J: 4 seconds.
 - 200 J: 6 seconds.

EXTERNAL (OPTIONAL)

- **Modes**
 - Demand or fixed.
- **Amplitude**
 - From 5 mA to 200 mA (resolution of 5 mA), accuracy 10%.

- **Pulse width**
 - 20 ms (tolerance of 10%).
- **Frequency**
 - From 30 PPM to 180 PPM (increments of 5 PPM), accuracy $\pm 2\%$.
- **Refractory period**
 - 340 ms (from 30 to 80 PPM).
 - 240 ms (from 90 to 180 PPM).

NIBP (OPTIONAL)

- **Operating principle**
 - Oscillometric.
- **Automatic mode**
 - 1, 2, 3, 4, 5, 10, 15, 30, 60 and 90 minutes.
- **Manual mode**
 - One measurement.
- **Measurement interval**
 - Adult range**
 - Systolic: 40 - 260 mmHg.
 - Mean: 26 - 220 mmHg.
 - Diastolic: 20 - 200 mmHg.
 - Pediatric range**
 - Systolic: 40 - 160 mmHg.
 - Mean: 26 - 133 mmHg.
 - Diastolic: 20 - 120 mmHg.
 - Neonatal range**
 - Systolic: 40 - 130 mmHg.
 - Mean: 26 - 110 mmHg.
 - Diastolic: 20 - 100 mmHg.
- **Overpressure limit by software**
 - Adult: 290 mmHg max.
 - Neonate: 145 mmHg max.
- **Overpressure protection by hardware**
 - Adult: 300 \pm mmHg.
 - Neonate: 150 \pm mmHg.
- **Resolution**
 - 1 mmHg.

CPR MAESTRO (OPTIONAL)

- **Accessory for Cardiopulmonary Resuscitation (CPR)**
 - Feedback of the thoracic compressions.

DISPLAY

- **Battery level indicator**
 - Yes.
- **Size**
 - 128.2 mm x 170.9 mm.
- **Diagonal**
 - 8.4".
- **Type**
 - Color LCD TFT.
- **Resolution**
 - 640 x 480 pixels (VGA).
- **Scan speed**
 - 6.25, 12.5, 25 e 50 mm/s.

ECG (supports up to 12 simultaneous derivations when equipped with optional module)

- **Inputs**
 - 3 or 5 lead ECG cable.
 - 10 lead ECG cable (optional).
 - External pads.
 - Multifunctional pads.
- **Range**
 - 15 to 350 BPM.

- **Precision**
 - ± 1 BPM from 15 to 350 BPM.
- **Rejection in common mode**
 - Higher than 90 dB, in compliance with the AAMI standards for heart monitors (EC 13).
- **Sensitivity**
 - 5, 10, 15, 20, 30 and 40 mm/mV.
- **AC line filter**
 - 60 Hz or 50 Hz.
- **ECG response frequency**
 - Diagnostic mode: 0.05 - 100 Hz.
 - Monitor mode: 1 - 40 Hz.
- **Patient insulation**
 - Defibrillation proof.
 - ECG: CF type.
 - SpO₂: CF type.
- **Loose electrode**
 - Identified and shown with low level alarm.
- **Time to re-establish the ECG baseline after defibrillation:**
 - ≤ 3 seconds.

SpO₂ (OPTIONAL)

- **SpO₂ range**
 - 0 to 100%.
- **Pulse range**
 - 30 to 250 BPM.
- **SpO₂ precision**
 - $\pm 2\%$ from 70 to 100%.
 - $\pm 3\%$ from 50 to 69%.
- **Pulse precision**
 - ± 2 BPM.

CAPNOGRAPHY (OPTIONAL)

- **CO₂ measurement interval**
 - 0 - 99 mmHg.
- **Precision**
 - ± 2 mmHg (0 - 38 mmHg).
 - $\pm 5\% + 0.08\%$. For each 1 mmHg above 38 mmHg (39 - 99mmHg).
- **Consumption**
 - 1.5 W.
- **Compensation**
 - BTPS, N₂O and O₂.

PRINTER (OPTIONAL)

- Prints up to three simultaneous derivations.
- **Type**
 - Thermal.
- **Weight**
 - 0,104 Kg.
- **Speed**
 - 25 or 50 mm/s with $\pm 5\%$ precision.
- **Paper size**
 - 58 mm (width) x 15 m (maximum length).

STANDARD

- NBR IEC 60601-1
- NBR IEC 60601-1-2
- NBR IEC 60601-1-4
- NBR IEC 60601-1-6
- NBR IEC 60601-1-8
- NBR IEC 60601-2-4
- NBR IEC 60601-2-27
- NBR IEC 60601-2-30
- NBR IEC 60601-2-49 or equivalent IECs.

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Some items are optional. Please verify availability.



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