

INSTRAMED

Apolus

The convenience of being close.

Robust, reliable, and ultra-fast, it is the perfect equipment for emergency situations — the only device on the market capable of charging to 360 J in an incredible less than 6 seconds.



apolus

Biphasic
Defibrillator

The Apolus is a next-generation biphasic defibrillator that utilizes biphasic energy technology, the most effective method for reversing ventricular fibrillation (VF) and pulseless ventricular tachycardia (VT). Suitable for adult to pediatric patients, it is lightweight, compact, and equipped with an internal battery, making it one of the most versatile and practical devices available. Designed for emergency response, patient transport, and even open-heart surgeries, it supports the use of internal paddles and can be connected to an external monitor for synchronized cardioversion.



Every minute is urgent.

The Apolus has unique features for the emergency care segment that optimize time and increase the chances of achieving its purpose: saving lives.



Smart Paddles

The external paddles are engineered to simplify and expedite device operation, integrating functions and indicators that assist medical professionals. This optimizes treatment initiation time.



This advanced technology enhances the reversal of VF and VT more efficiently by using lower energy levels, resulting in reduced myocardial injury post-treatment.

Available Parameters

- Biphasic energy delivery up to 360 J
- Simplified LCD display
- Adult paddles with integrated pediatric capability
- Charge-ready and patient contact indicators on paddles
- External cardiac monitor connection (for synchronized cardioversion)
- Ergonomic handles



Optimizing every second.

Advanced technology and software designed to meet the needs of emergency care, wherever it occurs.

Easy to use.

Key functions are consolidated into a single selector button, while the simplified LCD display provides clear feedback on selected shock therapy.



Fast and efficient.

Ready to deliver a shock in under 6 seconds, it provides biphasic energy up to 360 J (electronically limited to 50 J when using pediatric paddles or internal paddles).

GENERAL SPECIFICATIONS

- **Dimension with pads**
 - 44,5 cm (width).
 - 24,5 cm (depth).
 - 20,0 cm (height).
- **Weight**
 - Device: 3.0 Kg.
 - External set: 0.85 Kg.
 - Complete set: 4.75 Kg.
- **Electrical**
 - AC: 100 to 220 VAC, 50/60 Hz.
 - DC external: 11 to 16 VDC.
- **Removable rechargeable battery**
 - Type: NiMH, 14.4V DC 4.5 A/h.
 - Duration (fully charged): Minimum of 140 shocks at 360 J or a minimum of 200 shocks at 200 J.
 - Time to fully charge the battery (when fully depleted): 8 hours.
 - Battery level indication on display.
- **Optional rechargeable battery***
 - Type: Li-Ion, 14.8 VDC 4.4 A/h
 - Duration: 3 hours (fully charged battery), without the printer or a minimum of 140 shocks at 360 J or a minimum of 200 shocks at 200 J.
 - Time to fully charge the battery (when fully depleted): 8 hours.
- **Consumption (maximum)**
 - AC: 400 W.
 - Battery 15 A.
- **Fuse**
 - 5 A power supply.
- **Battery storage**
 - Storing the battery for long periods of time in temperatures higher than 35° C will reduce its capacity and lifetime.
- **Protection index**
 - IPX1.
- **Classification**
 - Class I, internally energized.
 - CF Type.
- **Operating mode**
 - Continuous operation.

ENVIRONMENTAL SPECIFICATIONS

- **Temperature**
 - Operational: 0 to 50°C.
 - Storage: 0 to 70°C.
- **Humidity**

- Operational: 10 to 95% RH, without condensation.
- Storage: 10 to 95% RH, without condensation.

DEFIBRILLATOR

- **Waveform**
 - Biphasic truncated exponential.
 - Wave shaped parameters adjusted according to the patient's impedance.
- **Shock application**
 - By means of multifunction pads or external adult/child pads.
- **Scales for adult/external defibrillation**
 - 5, 10, 15, 20, 30, 40, 50, 80, 100, 150, 200, 250, 300 and 360 J. Maximum energy limited to 50 J in internal or child pads.
- **Operation**
 - Standard sequence "1-2-3".
- **Selector key**
 - Allows turning the equipment on and off, selecting energy scales and activating functional test mode.
- **Command keys**
 - Charge, Shock, Disarm and Sync (Synchronism).
- **Charge command**
 - CHARGE button in front panel, button in external pads.
- **Shock command**
 - SHOCK button in front panel, buttons in external pads.
- **Disarm command**
 - DISARM button in front panel.
- **Synchronized command**
 - SYNC button in front panel.
- **Charge indicators**
 - Audio indication of equipment being charged, audio indication of charge completed, LED on external pads and charge level indicated on display.
- **Maximum charge time in maximum energy**
 - < 6s with 90% to 100% of the minimum specified voltage.
 - < 6s with a full charge.
 - < 13s from equipment initialization.
- **External pads size**
 - Adult = 10,3 cm x 8,5 cm – Area: 81,9 cm²
 - Children = 4,5 cm x 4 cm – Area: 18 cm²
- **Automatic internal discharge**
 - 30 seconds.
- **Synchronism**
 - Synchronism circuit with external signal of 1V/mV of a cardiograph or electrocardiograph.
- **Time of synchronized discharge**
 - < 60 ms after R wave peak.

- **Maximum output voltage**
 - 2000 V.
- **Maximum output electric current**
 - 80 A (25 Ω).
- **Defibrillation pads**
 - External adult and child (included).
 - Internal adult and child (optional).

DISPLAY

- **Battery level indication**
 - Yes.
- **Size**
 - 99 mm x 19 mm.
- **Type**
 - Alphanumeric LCD.
 - 12.5, 25 e 50 mm/s.

STANDARDS

- NBR IEC 60601-1
- NBR IEC 60601-1-2
- NBR IEC 60601-1-6
- NBR IEC 60601-1-9
- NBR IEC 60601-2-4 or equivalent IECs.

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*Optional.

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