

IT'S NOT HEART TO BE SAFE

Updated November 2017



Public Access Defibrillator



Professional Defibrillator

CARDIA
INTERNATIONAL

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WHY PUBLIC ACCESS DEFIBRILLATION?

Sudden cardiac arrest (SCA) can strike any person, anywhere, anytime. When someone collapses from SCA, immediate defibrillation and cardiopulmonary resuscitation (CPR) are essential for any chance of recovery. Immediate treatment is critical for SCA victims since survival chances decrease by about 10% with every minute without defibrillation.

Authorities agree that defibrillation should be provided as early as possible, preferably within first 3 to 5 minutes. Even with the fastest emergency medical service system, the professionals may not be able to reach the victim on time.

This results in the necessity of the lifesaving defibrillation to be delivered directly on the site of emergency within first minutes and by any responder.

POSSIBLE FOR **EVERYBODY** – EVERYWHERE!

CardiAid is designed to make life-saving defibrillation possible for everybody – accessible everywhere!

CardiAid Automated External Defibrillator (AED) is specially designed for public-access use, to provide life-saving defibrillation within the critical first minutes, until the professional care is available.

- CardiAid AED can be used by any first aid rescuer to save a sudden cardiac arrest victim. It guides the user with clear verbal and visual instructions throughout the process, including CPR assistance with metronomic signals for maximum efficiency.
- CardiAid AED is completely safe to use. Electroshock cannot be delivered unless it is indicated as necessary by the device.
- It provides the most effective treatment with its leading detection algorithm and current-based biphasic defibrillation technology.
- CardiAid AED is in accordance with the ILCOR 2015 ERC Resuscitation Guidelines.
- CardiAid AED is an innovative life-saving device which stands as a critical element for public AED programs, schools, sports centres, occupational safety & health practices, emergency response teams and maritime safety solutions. It also meets the needs of professionals such as emergency medical services (EMS) personnel, physicians and dentists; whose profession necessitates AED use.



» Survival chances decrease by about 10% with every minute without defibrillation

DISTINGUISHING FEATURES OF CARDIAID AED

CardiAid AED is designed to be easy to use and quick to treat.



- CardiAid automatically switches on by simply opening the cover.
- Pre-connected electrodes help save time and make the process simpler for the user.
- “Status indicator lights” provide easy interpretation of the self-test results.
- CardiAid guides the user step by step with a combination of clear voice instructions, illustrations and lights for the maximum efficiency. All steps are ensured to be applied accurately even if the responder has limited knowledge or experience.
- CardiAid works with one-button only* - the shock button. No on-off button, no time loss!
- CardiAid combines an accurate ECG detection algorithm with high sensitivity and specificity values with its current-based defibrillation technology for the most effective treatment.
- Paediatric treatment is available with special paediatric electrodes.
- CardiAid automatically activates paediatric mode when the special paediatric electrodes are plugged in.
- Any inessential function is omitted to make CardiAid perfect for public access defibrillation. No ECG display, no distraction!

*CardiAid CT0207RS works with one-button principle. CardiAid CT0207RF works fully automatic.

FACTS: EASILY ADAPTABLE

CardiAid is easily adaptable to future changes in resuscitation guidelines with configurable functions like voice prompts, CPR duration, CPR sequence (30:2 or hands-only); and chest compression frequency (100 to 120 bpm).



- CardiAid is ready for any unpredictable situation with high battery capacity to support up to 200 shocks/20 hours of monitoring.
- CardiAid stores the ECG and incident data with the highest capacity in industry: up to 4 events with a total duration of 3 hours.
- To minimize the responsibility of the owner and risk of forgetting to charge the battery, CardiAid does not use rechargeable battery.
- CardiAid supports more than 25 language options.
- Event and ECG data can be obtained easily through Bluetooth.
- CardiAid is easily adaptable to future changes in resuscitation guidelines with configurable functions like voice prompts, CPR duration, CPR sequence (30:2 or hands-only); and chest compression frequency (100 to 120 bpm).
- CardiAid Monitor 2 Technical Service Software offers a whole solution for all needs: Configuration, maintenance, troubleshooting, event data monitoring and many more.
- CardiAid has a unique maintenance policy. The device is programmed to warn every 2 years to remind the due date, reducing the responsibility of the owner. The periodical maintenance consists of battery & electrode replacement and special function tests.

CARDIAID PUBLIC ACCESS DEFIBRILLATOR

CardiAid CT0207RS
Semi-automatic AED and
CardiAid CT0207RF
Fully automatic AED

» The well-known
quality and design with
even more features



- Paediatric treatment possible using paediatric electrodes
- Auto-recognition of paediatric mode when special electrodes are plugged in
- Accurate ECG detection algorithm with high sensitivity and specificity
- Current-based defibrillation technology for the most effective treatment
- Improved illustrations and verbal instructions
- Recording multi-events up to 3 hours
- More than 25 language options
- CardiAid AED is in accordance with the ILCOR 2015 ERC Resuscitation Guidelines
- Easily adaptable to future changes in resuscitation guidelines with configurable functions like voice prompts, CPR duration, CPR sequence (30:2 or compressions-only); and chest compression frequency (100 to 120 bpm)
- Ready-to-communicate with a Gateway and able to send real-time self test results
- New generation CardiAid Monitor 2 Technical Service Software offering a whole solution for all needs: Configuration, maintenance, troubleshooting, event data monitoring and many more





» Paediatric treatment possible using paediatric electrodes.



CardiAid CT0207RS

One-button operation to provide easier control for the rescuer.

» Developed and manufactured in Germany

CardiAid CT0207RF

Fully-automatic:

No need to press the button to deliver the shock.



HOW TO USE CARDIAID

When you see a person lying unconscious:

- Make sure you, the victim and any bystanders are safe.
- Check the victim for a response. Gently shake the shoulders and ask loudly: "Are you all right?"

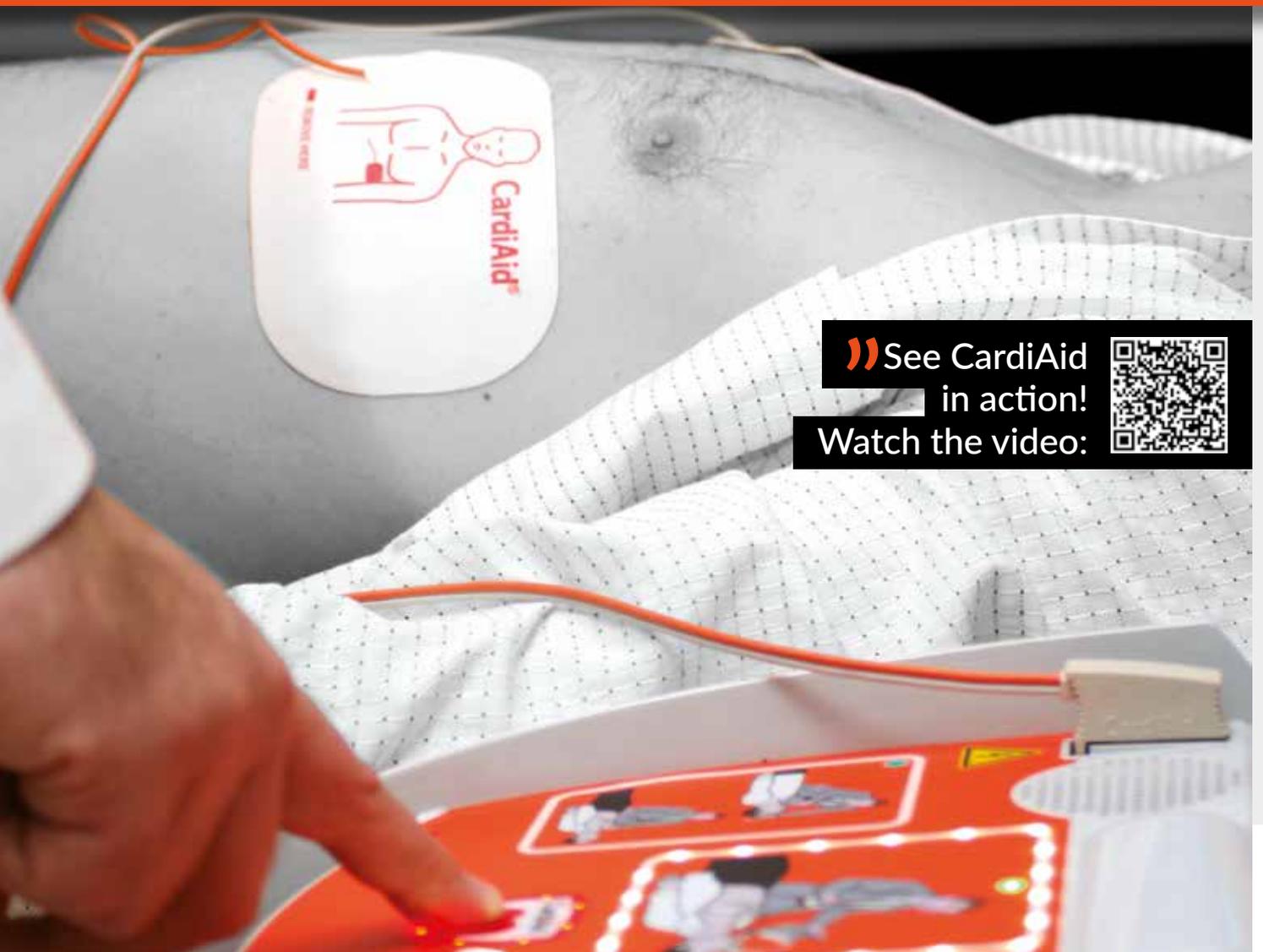
If he responds:

- Leave him in the position in which you find him, provided there is no further danger.
- Try to find out what is wrong with him and get help if needed.
- Reassess him regularly.



IF HE DOES NOT RESPOND:

SHOUT FOR HELP AND FOLLOW THESE STEPS:



» See CardiAid
in action!

Watch the video:





1
Turn the victim onto his back. Open the airway by tilting his head back and lifting his chin up. Look, listen and feel for breathing.



2
If breathing is absent or not normal, send someone for help and to bring the AED. Perform CPR until the AED arrives.



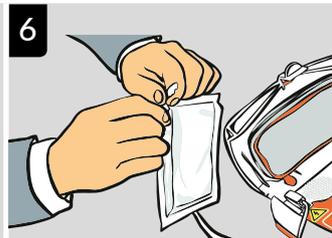
3
If you are on your own, use your mobile phone to alert the ambulance services.



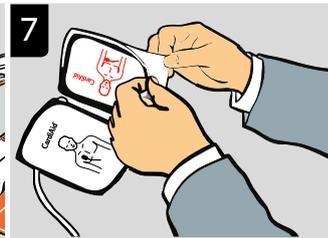
4
Cardiaid switches on automatically when the cover of the device is opened. Follow the verbal and visual instructions.



5
Open patient's chest. If necessary, use the scissors in the emergency kit of Cardiaid to cut the cloth of the patient.



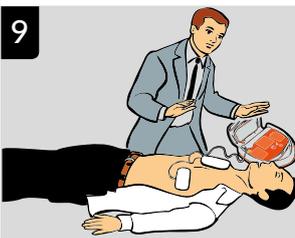
6
Open electrodes' package.



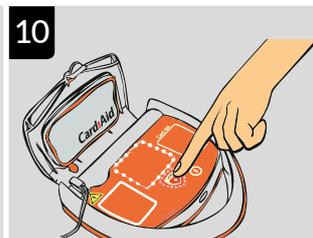
7
Peel off the film of one electrode and place the pad on patient's bare chest as shown on the pad.



8
Peel off the film of the second electrode and place the pad on patient's bare chest as shown on the pad.



9
Cardiaid immediately starts analysing the heart rhythm. Do not touch the patient from now on.



10
If electroshock is required, Cardiaid informs the user and prepares the shock automatically. In CT0207RS, electroshock is delivered by pressing the button. In CT0207RF, the device delivers the shock automatically after warning the user.



11
Cardiaid continues to guide the user through the resuscitation process. First make 30 chest compressions by following the verbal instructions. Cardiaid provides a metronomic signal with the correct rhythm for the chest compressions.



12
After 30 chest compressions, give 2 mouth-to-mouth breaths. Continue CPR by following the instructions of Cardiaid until "Do not touch the patient from now on." instruction is heard.

TECHNICAL SPECIFICATIONS

CardiAid CT0207RS / CardiAid CT0207RF



Defibrillation System

Operating Mode:

Automated (CT0207RS: one button operation / CT0207RF: full-automatic).

Wave Form: Biphasic, current-based.

Energy Delivery:

Adjusted to patient impedance, Programmable (factory settings).

Delivered Energy - Adult Mode:

170J (Average for 50 Ω at low energy level).
270J (Average for 50 Ω at high energy level).

Delivered Energy - Paediatric Mode:

50J (Average for 50 Ω at low energy level).
75J (Average for 50 Ω at high energy level).

Shock Sequence:

Constant or escalating, Programmable (factory settings).

Charging Time:

Typically <10 seconds*, maximum <15 seconds.*

ECG Analysis System

Analysis Time: Typically <10 seconds.*

Derivation: II

Asystole Threshold: <0,160 mV

Specificity NSR / Asystole: >95**

Sensitivity VF / pVT: >90**

Reaction to Implanted Pacemaker:

Normal cardiac pacemaker rhythms are not detected as shockable.

Movement Detection:

Checks signal quality, gives acoustic warning at patient movement.

Operation

Operating Elements:

- i) Automatic switch-on when the cover is opened.
- ii) Flashing shock button (one-button operation for CT0207RS, full-automatic operation for CT0207RF).
- iii) Info-button.



* Data are valid at 20°C with new, fully-charged batteries. Values can vary and are dependent upon storage and environmental conditions, frequency of use, pre-configured settings and the shelf life of the product.

** The algorithm and the board of CardiAid CT0207 AED offer the optimum combination of sensitivity and specificity. (Published in "Automated analysis of electrical signals of the human body for detecting of life threatening cardiac abnormalities", Igor Tchoudovski, Mensch and Buch Verlag, ISBN 3-89820-984-9, Pg 141)

Cardia International, at its own discretion, reserves the right to make changes pertaining to the technical features and the accessories of the device.

Cardia International, under no condition, shall be liable for any fault of spelling and/or writing in any and all instructive and informational data, documents, images given above and any direct, indirect, accidental, secondary legal or penal loss or damages may arise from them.

Info Mode:

Announcement of the elapsed time and number of shocks since device started, when info-button is pressed.

Display Elements:

Self-explanatory illuminated symbols (traffic light principle). Device status indicator symbols (for self-test result).

Defibrillation Electrodes

Range of Application:

Adult electrodes for patients >8 years / 25kg.
Paediatric electrodes for patients 1-8 years / <25kg.

Delivery Status:

Disposable, self-adhesive, single-use electrodes; ready-to-use, sealed and packed with connector outside pouch.

Polarization:

Not polarized (Exchange acceptable).

Active Surface Area:

166cm² (adult), 86cm² (paediatric).

Cable Length:

130 cm.

Shelf Life:

30 months from the manufacturing date (adult)

Data Management

Event Documentation:

Automatic recording of ECG and event data in internal memory up to 4 sessions with a total maximum duration of 2 hours 50 minutes.

Data Transfer:

Bluetooth (only for authorized service providers).

Event Review and Device Programming:

Via Bluetooth connection to PC with CardiAid Monitor Software (only for authorized service providers).

Self-Test

Schedule:

Automatic; daily, monthly and when device is opened

Timing:

Programmable (factory setting)

Scope:

Battery, electronics, software, charging

Energy Source

Type: Alkaline

Capacity: Up to 210* shocks

Monitoring Capacity: Up to 20* hours

Stand-by Period: 2 Years

Environmental Conditions

Operation:

- i) Temperature: +0°C to +50°C
- ii) Humidity: 0-95%
- iii) Air Pressure: 572-1060h/PA

Storage and Transport:

- i) Temperature: +0°C to +50°C
- ii) Temperature: -20°C to +70°C (max 2 weeks, without battery & electrodes)
- ii) Humidity: 0-95%
- iii) Air Pressure: 500-1060h/PA

Standards

Device Class: IIb (93/42/EEC)

Resuscitation Protocol: ERC, ILCOR 2015

Norms: EN 60601-2-4:3rd edition, rare use,

EMC: DIN EN 60601-1-2:2007-12

Free Drop: IEC 601-1:1988+A1: 1991+A2:1995

Protection Class: IEC 529: IP55 (protected against dust and water jets)

Dimensions and Weight

Dimensions: 301 x 304 x 112mm

Weight: 3,1 kg (including battery and electrodes)



CardiAid®
Public Access Defibrillator

THE STORIES: LIVES SAVED WITH CARDIAID AED

Thanks to immediate defibrillation of CardiAid and effective CPR, more sudden cardiac arrest victims are saved each day; young or old, men or women, in many places such as fitness clubs, swimming pool, supermarkets, and even on the street!



CardiAid saved life at the beach!

The Netherlands

A German tourist collapsed at the beach club renting CardiAid AED for more than a year and was rescued with CardiAid. Two shocks were given to bring him back to stable position.

CardiAid saved life at the office!

Turkey

The company doctor detected that a 59 – year old engineer with a complaint of a heavy pain on his heart is having heart crisis and then suddenly the patient had cardiac arrest in the health room of the company. He was so lucky working in a company equipped with CardiAid at the health room, and the doctor used CardiAid and saved him with one successful shock.

CardiAid saved life of a taxi driver!

Czech Republic

A 57-year-old taxi driver collapsed while he was driving. A policeman from Ricany City Police used CardiAid in the police car to save the victim. With a successful shock the man was brought back to life.

CardiAid saved life at a party!

The Netherlands

CardiAid was used to save a cardiac arrest victim at a party venue. During an anniversary party, one of the people dancing on the dance floor suddenly fell down. Luckily, the bystanders immediately started CPR and the venue staff were agile to bring the CardiAid AED which had been purchased only 3 weeks before the incident; "the best purchase ever" as stated by them.

CardiAid saved life in a superstore!

The Netherlands

Immediate CPR from bystanders and the successful treatment of CardiAid saved a 68-year-old person who had sudden cardiac arrest while he was shopping in a consumer electronics superstore.

CardiAid saved life in a sailing club!

Denmark

A 77-year-old sudden cardiac arrest victim was saved by the successful defibrillation of CardiAid at the sailing club. He is reported to be healthy and was discharged from the hospital a few days later.

CardiAid saved life in a neighbourhood!

Ireland

In Ireland, a 70-year-old man had a sudden cardiac arrest while he was at home with his son. When he suddenly collapsed, his son called for help. A neighbour brought CardiAid AED which was installed in an outdoor cabinet in the community. With one successful shock, the patient was brought back to life. In a short time, the paramedics arrived and took over the case.

CardiAid saved life on the road!

Spain

In Spain, when a police car went to intervene in a car accident, a policeman realized that the driver was having sudden cardiac arrest, which also caused the accident. He immediately took out the CardiAid AED which was installed in the police car and saved the driver.

CardiAid saved life at a swimming pool!

Spain

CardiAid was used successfully to save the life of a 39-year-old sudden cardiac arrest victim in a swimming pool complex. When the lifeguard noticed that the man was unconscious, he asked the staff to bring the CardiAid AED and immediately started CPR. The patient was brought back to life thanks to the successful defibrillation of CardiAid AED and immediate CPR.

CardiAid saved life of a teenage runner on the street!

The Netherlands

A 14-year-old victim who suddenly collapsed on the street during the running event of his school was saved by the immediate defibrillation of CardiAid AED.

CardiAid saved life in a medical clinic!

New Zealand

A 42-year-old sudden cardiac arrest victim was saved by the successful defibrillation of CardiAid in the resuscitation room of a medical clinic.

CardiAid saved life in a sports club!

Denmark

A 53-year-old man was saved by one successful shock of CardiAid, in a sports club. He was reported to be in a stable condition and left the hospital a few days later.

CardiAid saved life at a supermarket!

France

The customer, who was shopping at one of the supermarkets belonging to a super market chain in France, suddenly collapsed. He was revived after the successful intervention of CardiAid AED.

CardiAid saved life in a sports club!

France

CardiAid was used successfully in a sports club to restore the normal heart beat of a person who suffered from sudden cardiac arrest.

CardiAid saved life at a gym!

The Netherlands

A 28-year-old man suffered from sudden cardiac arrest during his daily workout at a fitness centre. With one successful shock administered by CardiAid AED, he was brought to life.

CardiAid saved life in a supermarket!

France

A man at an advanced age had a heart attack while he was shopping at one of the supermarkets belonging to a supermarket chain in France. The security officers of the supermarket intervened with the CardiAid AED installed at the supermarket and saved the cardiac arrest victim.

CardiAid saved life at a grocery store!

Denmark

A 60-year-old man shopping at a grocery store in Denmark suffered from sudden cardiac arrest. He was saved by CardiAid which was located at the dental clinic across the street.

CardiAid saved life at a tennis club!

The Netherlands

A 62-year-old man who suddenly lost conscious while playing tennis was saved with the successful electroshock of CardiAid AED which was installed at the tennis club.

CardiAid saved life at a supermarket car park!

France

The security guard of a supermarket saved a customer using CardiAid. The person was headed to his car in the car park when he suddenly fell. A security guard grabbed CardiAid which was in the store and saved his life. He was conscious again when the ambulance arrived.

CardiAid saved life at a football pitch!

The Netherlands

CardiAid saved a 38-year-old man who had sudden cardiac arrest during an amateur football tournament between companies. When he suddenly fell, a colleague started CPR and a bystander ran to grab CardiAid which was located in a farm nearby. With one successful shock, he was brought back to life.

)) A 14-year-old victim who suddenly collapsed on the street during the running event of his school was saved by immediate defibrillation of CardiAid AED.

CARDIAID EDUCATION

When a person has sudden cardiac arrest, the situation will be stressful, hectic and even chaotic. It is difficult, yet critical to act quickly in this environment since every second counts. For this reason, it is advised for potential users of CardiAid AED to be trained periodically with CardiAid Trainer, Cardio First Angel and “BRAYDEN” CPR Manikin.

EDUCATION TOOLS

CardiAid Trainer

CardiAid Trainer is designed considering special needs for AED training:

It has the same appearance with CardiAid AED, aimed to make trainees familiar with the product.

It can simulate all possible scenarios a user may face while using CardiAid AED; and the user can be trained about the actions to take in each situation.

It is operated by the instructor with remote control. The instructor may set different scenarios instantly according to the need of each user and/or the subject of the training session.

It can operate in more than 24 languages:

- English
- Dutch
- French
- German
- Turkish
- Italian
- Spanish
- Catalan
- Portuguese
- Hungarian
- Macedonian
- Persian
- Danish
- Norwegian
- Swedish
- Finnish
- Thai
- Polish
- Czech
- Slovene
- Arabic
- Chinese-Mandarin
- Chinese-Cantonese
- Brazilian Portuguese

» CardiAid Trainer, “BRAYDEN” CPR Manikin and Cardio First Angel are the right tools for any AED and CPR training.

Model No: CDT02



Cardio First Angel

Cardio First Angel – the perfect tool to train and practice CPR

Without any electricity or battery – purely mechanically is the Cardio First Angel always on standby. Its applicability is shown in uncomplicated and international comprehensible icons.

The specific design of the Cardio First Angel guarantees the correct positioning on the patients breast, so the cardiac massage works exactly where it is needed. A special foam creates a soft contact surface and absorbs sudor.

A special spring signalises the perfect pressure of 41 kg with a clear click-sound. The click-sound is also audible with the following release of the spring. If the first-aider is geared to these two click-sounds he will automatically reach the required frequency of round about 100 compressions per minute.

Cardio First Angel is also a CPR assistant to be used on a sudden cardiac arrest victim.

Model No : CCPR02



CPR Training Manikin “BRAYDEN”

The ultimate purpose of the CPR is to maintain a flow of oxygenated blood to be brain during during cardiac arrest to prevent serious brain damage.

“BRAYDEN” is the first CPR Manikin ever to display the virtual flow of blood from the heart to the brain during CPR.

Furthermore, with the aid of this “BRAYDEN” CPR Manikin, trainees will not only learn with ease how to execute CPR correctly in time of need, the skills learned using the “BRAYDEN” CPR Manikin will be remembered for life due to the positive feedback innovations built into “BRAYDEN”



Model No : CCM01

» The “BRAYDEN” is the first CPR Manikin ever to display visual flow of blood from the heart to the brain during CPR.

CARDIAID AED STORAGE AND PROTECTION

When someone suffers from sudden cardiac arrest, every second is critical. In a public place, it may be a problem for the responder to know whether there is an AED on site and to bring the AED to the scene. On the other hand, the AED should be protected when in a public place; like airports, city halls and schools. For this reason, Cardi-Aid AED should be stored where it may be noticed and reached quickly while providing safety of the device. With their special designs, CardiAid AED Cabinets ensure that CardiAid AED is noticeable and easily reachable in case of an emergency.

STORAGE AND PROTECTION

Rotaid Solid Plus Heat AED OutDoor Cabinet

The Rotaid Solid Plus Heat is an innovative AED wall cabinet that ensures a recognizable and robust storage of your AED device. The characteristic round shape and green colour, make it easy to be found and recognized and comes with a high quality appearance. The large AED logo, positioned in the transparent centre of the cover, leaves no room for interpretation. This is a life saving device.



The cabinet can be opened by an intuitive twist that removes the whole cover. The responder therefore has full access to the AED that hangs via a bracket for a quick and easy grab. The cover is attached to the back plate via a belt and needs no further attention from the responder. A stainless steel hook, attached to the bottom of the cabinet, can hold a seal, tag or other appliance.

An audible alarm of 90 dB makes sure the AED is well protected.

Length 48 cm. Width 48 cm.
Depth 18 cm. Weight 6,7 kg.

Length 18,9" Width 18,9".
Depth 7,1". Weight 14,7 lbs.

Model No : CC003R

Information Board and Wallmount

With its special design, CardiAid Wallmount ensures that CardiAid AED is noticeable and easily reachable in case of an emergency. CardiAid Wallmount provides practical storage for CardiAid AED. CardiAid Wallmount also provides storage for spare electrodes, if necessary. CardiAid Wallmount is especially suitable for places where there is no need to secure the AED with CardiAid AED Indoor or Outdoor Cabinet.

It is advised to install CardiAid Wallmount, Information Board and AED signs to increase the visibility of the AED point and thus the effectiveness of the public access defibrillation / AED Program.

Length: 32,8 cm. Width: 15 cm. Height: 18 cm.

Length: 12,9". Width: 5,9". Height: 7,1".

Model No: CT0207WR



Rotaid Swift – Indoor Cabinet

The Rotaid Swift is an innovative AED wall cabinet that ensures a recognizable and sustainable storage of your AED device. The characteristic shape and green color make it easy to be found and recognized and comes with a high quality appearance. A quick twist to the left opens the cabinet in an instant.

The large window, with a prominent AED logo, offers a full view on the defibrillator and its indicator.

An audible alarm of 90 dB makes sure the AED is well protected.

Length 43,5 cm. Width 36,6 cm.

Depth 21 cm. Weight 4,5 kg

Length 17,1". Width 14,4"

Depth 8,3". Weight 9,9 lbs

Model No: CC004R

» With their special designs, CardiAid AED Cabinets ensure that CardiAid AED is noticeable and easily reachable in case of an emergency.

THE NEW BIPHASIC DEFIBRILLATOR FOR EMERGENCY SERVICES AND HOSPITALS

CardiAid introduces two new biphasic defibrillators for emergency services and hospitals; CardiAid Pro & CardiAid Pro+.

» Operating modes:
Manual defibrillation,
AED, Pacing or
Monitoring.



- Current controlled biphasic waveform
- 1J to 300J in 19 steps
- More than 100 shocks at 300 joules from a new fully charged battery
- Charge to 300J in 8 seconds or to 200J in 5 seconds from mains or battery
- Quick energy selection via rotary switch
- Suitable for adult & paediatric applications
- 6.5" colour LED display
- 3L/5L ECG support
- 48 mm thermal line printer





» Uses CardiAid AED's disposable, self-adhesive, single-use adult and paediatric electrodes (for Cardia Pro+)



CardiAid Pro

CardiAid Pro employs current controlled, time limited biphasic defibrillation.

CardiAid Pro+

Additional features:
 AED mode with voice prompts
 Internal defibrillation
 Pacing NiBP SPO2.



TECHNICAL SPECIFICATIONS

CardiAid PRO / CardiAid PRO+



Defibrillator - Manual Defibrillation

Waveform: Current controlled, time limited biphasic. Waveform parameters compensated for patient impedance.

Output Energy: 1J-10J, 20J, 30J, 50J, 70J, 100J, 150J, 200J, 250J, 300J (19 steps). Limited to 50J for paediatric mode.

Charge Control: Charge and shock controls on base unit as well as paddles.

Patient Impedance Range: 25Ω to 400Ω

Type: CF

Defibrillator - AED (Pro+ Only)

Output Energy: 150J for adult, 50J for paediatric (factory default) nominal into a 50Ω test load through disposable pads.

AED Control: On/Off, Pause analysis, Analyse, Shock

Prompts: Text and voice prompts

ECG Analysis: Evaluates patient ECG and signal quality for identifying shockable rhythms, proper contact and motion artefact.

Shockable rhythm identification for ventricular fibrillation and ventricular tachycardia with sensitivity better than 90% and specificity for nonshockable rhythms better than 95%.

Defibrillator - Charging Time

- Less than 8 seconds to 300 Joules with a new, fully charged Battery at 25°C.
- Less than 8 seconds to 300 Joules with AC power at 90%-110% rated AC mains voltage.
- Less than 5 seconds to 200 Joules with a new, fully charged Battery at 25°C.

Defibrillator - Controls & Indicators

Controls: Energy selector knob, SYNC enable/disable key, CHARGE key, SHOCK key, DISARM key, MODE selection key, Adult/Paediatric mode selection key, context sensitive Soft keys, Print ECG key, Print Summary key, Alarm Acknowledge Key.

Indicators: LCD display for indicating energy, ECG, heart rate, battery status, clock and other text prompts, audio alerts for charging status, QRS beep, context sensitive back-lit keys for displaying status / availability of SYNC, CHARGE and SHOCK.

Charge Control: CHARGE button on base unit or button on APEX paddle.

'Armed' Indicators: Charge done tone, available energy indication on screen and active backlight on SHOCK button.

Shock Control: SHOCK button on base unit or buttons on external paddles.

Synchroniser: When enabled the SYNC key is back-lit with green colour and 'SYNC' message displayed on screen.

Pacing (Pro+ Only)

Type: External transcutaneous pacing.

Mode: Demand / Fixed.

Pulse Characteristics:

Pulse form: Monopolar / Pulse duration: 20mS

Current range: 0mA-200mA / Current steps: 5mA

Rate: 30bpm - 180bpm



ECG

Lead Configurations: Paddle, 3L, 5L (optional2)

Leads: Paddle, I, II, III

V, aVR, aVL, aVF (only with 5L cable)

Display: Single channel.

Gain: 5mm/mV, 10mm/mV (default), 20mm/mV

Display Trace Speed: 12.5mm/S, 25mm/S (default), 50mm/S

Lead Fault: Lead off message displayed on screen.

ECG Cable Fault: Cable fault message displayed on screen.

Paddle Fault: Pad poor contact message displayed on screen.

Heart Rate Display: 30 - 250 bpm with an accuracy of $\pm 10\%$ or ± 5 bpm which ever is greater.

Heart Rate Alarm: Configurable lower and upper limits.

Frequency Response: 1Hz- 40Hz.

ESU Protection: Suitable for use in presence of ESU. Burn hazard protection by means of 1K current limiting resistors on ECG cable.

Type: CF

NiBP (Pro+ Only)

Method Of Measurement: Oscillometric

Blood Pressure Range:

Adult: Systolic: 50mmHg to 250mmHg
Diastolic: 30mmHg to 195mmHg

Paediatric: Systolic: 40mmHg to 150mmHg
Diastolic: 20mmHg to 100mmHg

Heart Rate Range: 40bpm to 250bpm

Initial Inflation Pressure:

Adult: 160mmHg (default). Variable from 120 - 280mmHg

Paediatric: 120mmHg (default). Variable from 80-190mmHg

After the first BP reading has been performed, the next initial inflation pressure will be at 30mmHg above the mean of previous three Systolic reading or lower limit of initial inflation pressure which ever greater.

Accuracy: ± 5 mmHg mean deviation with standard deviation less than 8mmHg, as per AAMI SP10 guidelines. HR: ± 3 BPM or 5%, which ever is greater.

Patient Safety:

- Maximum cuff inflation time is limited to 50 seconds in all modes.
- Duration of blood pressure reading is limited to:
 - 130 seconds in adult mode
 - 90 seconds in paediatric mode.
- Measurement abort if:
 - Cuff pressure exceeds 300mmHg in adult mode or 150mmHg in paediatric mode.
 - Cuff stays inflated above 10mmHg for longer than 180 seconds in adult or paediatric mode.

SpO2 (Pro+ Only)

Range: Pulse rate : 20 - 250BPM
Saturation : 1 - 100%

Accuracy: Pulse rate:
20 - 220BPM : ± 3 BPM
220 - 250BPM : ± 5 BPM
Saturation
100 - 70% : ± 2 digits
69 - 50% : ± 5 digits
49 - 1% : unspecified

Patient Isolation: Type CF

Display

Dimensions (active): 6.5" (132mm x 99mm)

Type: TFT Colour LCD with LED Backlight

Resolution: 640 x 480 pixels (VGA)

Battery

Type: 12V, 5Ah, Rechargeable, SLA (Sealed Lead Acid)

Dimensions: 90 x 70 x 107 mm

Weight: 1.8 Kg

Charging Time: Approximately 4Hrs to 80%

Shock Cycles: Approximately 100 full energy (300 Joule) shocks from a new fully charged battery

Printer

Printing Method: Direct thermal line printing

Print Width: 48mm

Paper Width: 50mm

Printing Speed: 25mm/S

Paper Usage: Approximately 41 Shock Reports from a new roll

General

Mode Of Operation: Continuous

AC Power Input: 100Vac to 240Vac, 50Hz - 60Hz

Dimensions: 33.5cm (H), 37.6cm (W), 22.7cm (D)

Weight: 7.5Kg (including external paddle with cable and battery)

Environmental

Operating Temperature: 0°C to 40°C

Storage Temperature: -20°C to 60°C

Humidity: 95% RH non-condensing (max)

Operating Altitude: Up to 4500m

Transportation: Up to 4500m

Ingress Protection: IPX1

Conformance

IEC60601-1,
IEC60601-2-4,
IEC60601-2-27,
IEC60601-2-30,
IEC60601-2-61

REFERENCES OF CARDIAID PUBLIC ACCESS DEFIBRILLATOR

The CardiAid AED has been
designed for public use!



CardiAid Equipped Vehicles

- TAM Linhas Airlines - Brasil
- GOL Linhas Airlines - Brasil
- Jet Time Airlines - Denmark
- PT. Kereta Api, Train - Indonesia
- Atlantic Airways - Faroe Islands
- Chemfleet, Vessel Fleet - Turkey
- Panorama Langkawi Cable Car - Malaysia
- Air Enka - Turkey

CardiAid Equipped Sports Clubs

- Arsenal Football Club - U.K.
- Besiktas Football Club - Turkey
- Trabzonspor Football Club - Turkey
- Besiktas Basketball Club - Turkey
- National Basketball Team - Slovenia
- National Basketball Team - Turkey

CardiAid Equipped Hotels

- Ibis Hotel Chain - U.K.
- Amstel Hotel - Holland
- Hilton Dublin - Ireland
- Hotel Sofitel Casablanca - Morocco
- Medina Palms - Kenya
- Puri Kiic Golf View Hotel - Indonesia
- Hotel Mercure Golf Seilh - France
- Holiday Inn Topkapi - Turkey
- Val Thorens - France

CardiAid Equipped Shopping Malls

- IKEA - Spain
- Lidl Supermarkets - France
- Media Markt - Holland
- Secon Square Shopping Mall Bangkok - Thailand
- E. Leclerc - France
- Royal Ahold Supermarkets NV - Holland

CardiAid Equipped Corporates

• Abdi Ibrahim Pharmaceutical	-	Turkey	• Eti Group	-	Turkey
• Adidas	-	France	• Eurofit	-	France
• Henkel	-	Ireland	• FCC Environment	-	U.K.
• Aircelle Maroc	-	Morocco	• Solmed Alliance	-	Spain
• Alstom Grid	-	Turkey	• GE Indonesia	-	Indonesia
• Assan Aluminyum	-	Turkey	• Geberit	-	Holland
• Bel Group (La Vache)	-	Turkey	• GFI	-	France
• Bosch	-	Turkey	• Grimme	-	France
• BP Petrol	-	Turkey	• Habets	-	Holland
• Brinkers	-	Holland	• Harsco	-	India
• Carmignac	-	France	• Heimbürger (Grand' Mere)	-	France
• Covidien	-	Turkey	• Herder	-	Holland
• Croon	-	Holland	• Hi-Tec Sports	-	Holland
• Cummins	-	Turkey	• Indesit	-	Turkey
• Danish Stock Exchange	-	Denmark	• Inditex Group	-	Spain
• Deloitte	-	Denmark	• Kersten Europe	-	Holland
• Dr. Oetker	-	France	• La Poste	-	France
• DSV Global Transport and Logistics	-	France	• Lafarge	-	France
• Emerson Electric	-	Thailand	• Loreal	-	France
• Enka	-	Turkey	• Lukoil	-	Turkey
• Royal Greenland	-	Greenland	• Maltha	-	Turkey
• Rabobank	-	Holland	• Marsa Maroc	-	Morocco
• Acibadem Insurance	-	Turkey	• Mead Johnson Nutrition	-	Thailand
• Agro Delta	-	Holland	• Monsanto	-	France
• Air Products	-	Holland	• HOLLCIM (Cement Ind.)	-	Indonesia
• Akzo Nobel	-	France	• SKF Logistics Services	-	Belgium
• Alvac	-	Denmark			
• Axa France	-	Morocco	and many more...		
• Borgers	-	Czech Republic			
• Bossa	-	Turkey			
• BRF Brasil Foods	-	Brasil			
• Cargill	-	France			
• Caterpillar	-	Turkey			
• C-Power	-	Belgium			
• Crown Bevcan	-	Turkey			
• Daedalus	-	Holland			
• Dell Computer	-	Turkey			
• Demag Cranes	-	U.K.			
• Draka Comteq	-	Holland			
• Emerson	-	India			
• Enerjisa	-	Turkey			
• Mont Blanc	-	France			

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