



PRIMEDIC™

HeartSave

BRINGING YOU BACK TO LIFE

AUTOMATIC EXTERNAL DEFIBRILLATORS  
FOR FIRST AID PERSONNEL



PRIMEDIC™  
Saves Life. Everywhere.

A photograph of four soccer players standing on a green field under a clear blue sky. The players are arranged in a line from left to right, increasing in height and youthfulness. The first player on the left is an older man with grey hair, wearing a yellow jersey and dark shorts. The second player is a middle-aged man with grey hair, also in a yellow jersey and dark shorts. The third player is a younger man with brown hair, wearing a yellow jersey, dark shorts, and dark socks. The fourth player on the right is a younger man with dark hair, wearing a yellow jersey and dark shorts. A soccer ball is on the grass in the bottom left corner. A tall stadium light tower is visible in the background on the left. The text is overlaid on a semi-transparent red horizontal band across the middle of the image.

HERE TODAY, GONE TOMORROW

PRIMEDIC™ DEFIBRILLATORS –  
MAKING SURE THERE IS A TOMORROW

## THURSDAY, 10 JUNE – STUTTGART-OST SOCCER STADIUM - 18.30

Paul F. is 39.  
He never misses a chance to score.  
His favourite position is up front.  
Just as it is at work.  
According to his team-mates,  
he never leaves a gap in midfield.  
Then he makes a solo run. Just one dramatic shot  
is all that's required.  
Suddenly, his heart rhythm collapses.  
He falls into an abyss of blackness.  
**Cut.**

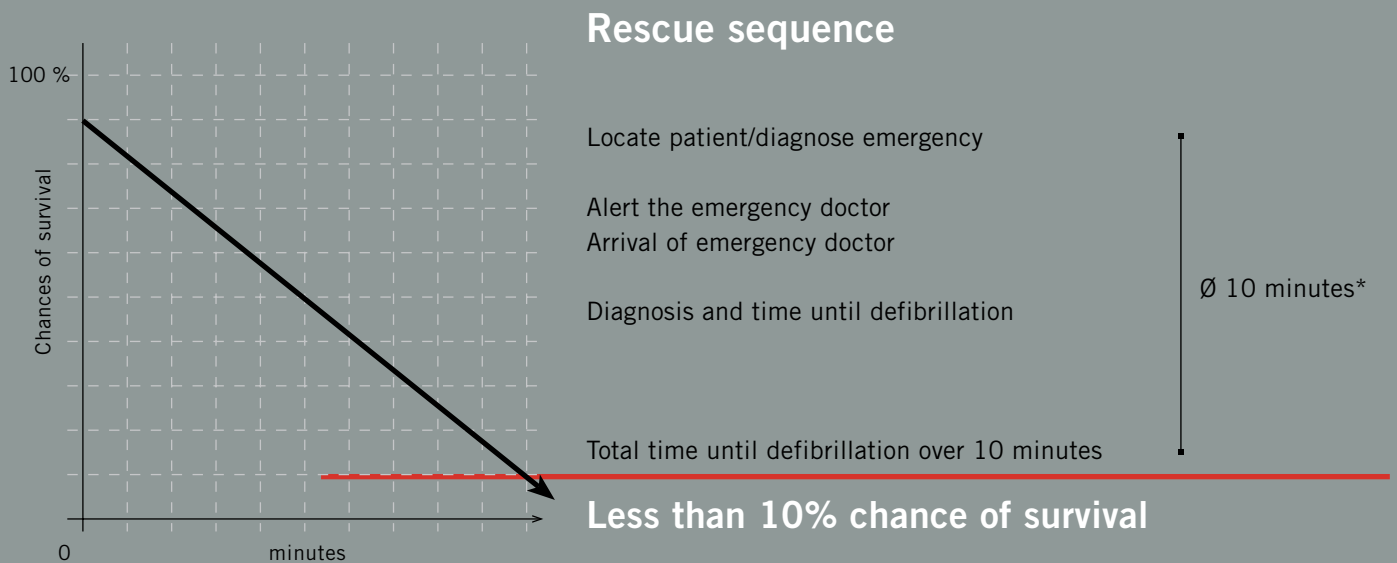
PRIMEDIC™ defibrillators can intercede to make lifesaving decisions at the crossroads between life and death: By delivering the critical impulse, they offer those affected the chance of a direct free kick back into life - from limbo back onto the pitch in time for the second half kick-off.

## Sudden cardiac arrest – every second counts!

In Europe, around 300,000 people a year die as a result of a sudden heart attack. This makes it the No.1 cause of death – ahead of cancer and strokes. This figure could be considerably lower if public facilities, fitness studios, nursing services, companies or private households were also equipped with an automatic defibrillator (PAD, AED, AED-M). This allows first aid providers with no prior medical training to use simple hand manoeuvres to become instant lifesavers. The patient only has a few precious minutes left for a chance of survival. Sudden cardiac arrest can lead to death within minutes unless immediate first aid is provided.

## Fibrillation – it can happen to anyone

Sudden heart attacks are caused by life-threatening fibrillation. And it can happen anytime and anywhere: at home, at work, out on the playing field. Initial care for the patient includes cardio pulmonary resuscitation. However, this process alone will not eliminate fibrillation. Only through early defibrillation, that is, treatment using a controlled impulse of energy delivered by an automatic external defibrillator (AED), can fibrillation be effectively halted.



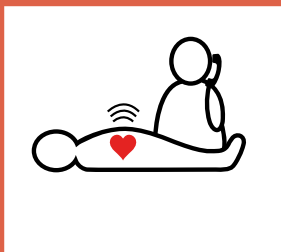
\*Source: Federal Office of Civil Protection and Disaster Assistance (Germany)



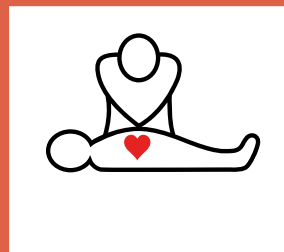
## Defibrillation – controlled impulse using the PRIMEDIC™ HeartSave

Medical studies have shown that the probability of survival falls rapidly the more time elapses between the onset of heart fibrillation and the administration of a defibrillation shock. If this measure is delayed, the brain can suffer irreparable damage after approx. 5 minutes, if other critical measures such as cardio pulmonary resuscitation are not performed. This delay can significantly worsen the prognosis of the individual affected and make it much more difficult for them to regain a good quality of life subsequently.

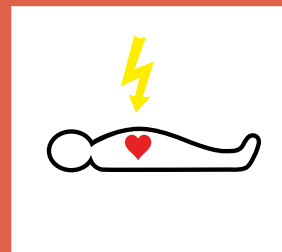
In developing our defibrillators, our objective was therefore to develop an intelligent and user-friendly concept that even people who are not medical experts can operate. The PRIMEDIC™ automatic external defibrillators for first aid personnel are based on safe, technically mature and proven technology. Simple hand manoeuvres alone provide professional assistance. The device only delivers an electric shock if life-threatening fibrillation is actually detected. Easy-to-understand spoken instructions and clear display symbols guide first aid personnel step-by-step through the rescue procedure.



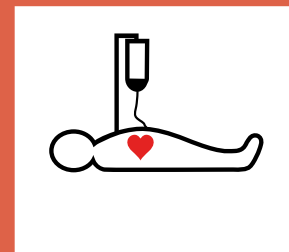
Swift identification and call emergency services



Early cardio pulmonary resuscitation  
Saving time



Early defibrillation  
AED



Initiate supplementary  
measures

## Current Controlled Defibrillation

Two-phase defibrillation technology used in the PRIMEDIC™ HeartSave device family spares the patient's heart muscles. The impulse output generates a current-regulated defibrillation impulse, which eliminates damaging peak loads: specific to each patient, gently and effectively.



HeartSave



## THE AUTOMATIC DEFIBRILLATOR FOR EVERYDAY SITUATIONS

Specifically for first aid workers, we have designed the HeartSave family of devices, which are foolproof to operate and which combine simple operator guidance with tried and tested functionality.

An emergency situation can happen anytime and anywhere: Whether at work or at play, at home or on the road.

Your first aid could be somebody's last chance.

Respond with all of your heart. Life is precious.

**PRIMEDIC™** - providing the energy to help save lives.





# HeartSave AED

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## 1 Operator Guideline

An AED offering easy and intuitive operation thanks to clear language instructions and frequency specifications throughout the entire application process

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## 2 Release button

Genuine one-touch operation. With just one button, you can save lives.  
Once the device has been cleared for use, defibrillation is triggered by pressing the release button

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## 3 Connection jack

Connection for SavePads

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## 4 Language selection

Active selection of spoken instructions during deployment

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## 5 Status display

The status display provides information about the operating state (regular self-tests)

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### Features:

Spoken instructions in three languages  
Compact Flash Card with ECG viewer  
6 year lithium battery

## YOUR RELIABLE COMPANION

The onset of sudden cardiac arrest cannot be prevented.  
But the consequences can!

### Saves lives – fully portable – swift

The person affected has only a few precious minutes left for a chance of survival. The HeartSave (AED/PAD) only delivers an electric shock if life-threatening fibrillation is actually detected. Easy-to-understand spoken instructions and clear display symbols guide the user step-by-step through the rescue procedure, thus eliminating the possibility of the device being operated incorrectly.

### Reliability

is the top priority at PRIMEDIC™. Safety aspects such as clear operation, routine self-tests, hoseproofness and exceptional ruggedness set the HeartSave apart.

## HeartSave PAD

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### Operator Guideline as in AED

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### Features:

Spoken instructions in one language  
Compact Flash Card  
3 year lithium battery





### Speed

In an emergency, speed is of the essence. Thanks to **the device's automatic start-up function** when the cover is removed and the automatic analysing rhythm, the automatic external defibrillator for first aid personnel by PRIMEDIC™ sets additional benchmarks when it comes to speed.

# HeartSave AED-M

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## 1 Monitor/Operator Guideline

An AED offering easy and intuitive operation thanks to a high-resolution 4.7" blue-mode monitor (12 cm diagonal and the biggest display of all AEDs on the market), display of language instructions and precise frequency specification during the entire application process

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## 2 Release button

Genuine one-touch operation. With just one button, you can save lives. Once the device has been cleared for use, defibrillation is triggered by pressing the release button

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## 3 Connection jack

Connection for SavePads or ECG monitoring cable

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## 4 Setup menu

Configuration in the setup menu, language instructions selectable

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## 5 Status display

The status display provides information about the operating state (regular self-tests)

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## EASY-TO-USE

Totally reliable

### Monitor

In addition to the advantages of the AED, the AED-M is equipped with a monitor for displaying action time, ECG curve, heart rate, detected VF/VT as well defibrillations generated and BLS instructions. The high-resolution monitor ensures that the device can also be used under difficult conditions.

### Monitoring

A separate ECG cable and standard ECG electrodes can also be used to provide cost-effective monitoring.

### Features:

Spoken instructions in three languages  
Compact Flash Card with ECG viewer  
6 year lithium battery



#### Data storage

Safety is guaranteed by recording each deployment, ECG, buttons operated and defibrillations. Seamless documentation of all events relevant to the device's use is available at all times. All HeartSave devices can be updated quickly and easily with the aid of the Compact Flash Card.



## ACCESSORIES



**PRIMEDIC™ battery 3/battery 6**  
3 years standby time  
6 years standby time



**PRIMEDIC™ SavePads**  
With brief instructions. Available in various languages.



**PRIMEDIC™ SaveBox**  
Also available as SaveBox advanced with acoustic and visual alarm



**PRIMEDIC™ HeartSave carrying bag**  
With rear stowage compartment and viewing window, incl. shoulder strap and shoulder pad



**PRIMEDIC™ wall box**  
For public buildings.  
Standard colour: red



**PRIMEDIC™ HeartSave case**  
Available in a range of colours, water and dust-proof, fracture-proof, 380 x 270 x 180 mm.  
Standard colours: black or orange, other colours available on request



**PRIMEDIC™ Defibrillator label**  
2 defibrillator location labels,  
12 direction arrows right and left



**PRIMEDIC™ EKG patient cable 2-pole**  
Additional accessories available on request.



## TECHNOLOGY AT THE BEATING PULSE OF LIFE

As an innovative medical technology company, METRAX has advanced its position worldwide to become a pioneer in the field of emergency medicine.

## Realistic training opportunities and instruction courses for first aid personnel

All PRIMEDIC™ defibrillators for first aid personnel are extremely easy to operate. However, thorough instruction courses and regular training opportunities create the basis for using the device quickly and efficiently in an emergency. METRAX offers a range of training opportunities and instruction courses for first aid practitioners that allow the practitioners to acquire and build on knowledge of lifesaving measures based on realistically simulated emergencies. For facilitators and trainers, METRAX offers a cost-effective AED Trainer including 6 real-life scenarios. An optional remote control helps course instructors adapt the programme of exercises to their own specific training courses and confront participants with unexpected situations.



Since 1973, we have combined our outstanding expertise with intelligent medical technologies and the latest clinical studies to support the development, production and sales of our tried and tested professional and automatic defibrillators of the PRIMEDIC™ brand.

A spirit of pragmatic innovation and many years of experience is the lifeblood pumped into our daily research and development work.

Premium quality products – made in Germany: For emergency rescue personnel across the globe, PRIMEDIC™ defibrillators and mobile ultrasound devices stand for the highest safety standards, swift readiness for use and exceptionally ease-of-use - all at an excellent price/performance ratio. Throughout their entire life-cycles, our products are distinguished by an uncompromising approach to quality and unrestricted functional capability, even under the toughest operating conditions.

**PRIMEDIC™. Saves Life. Everywhere.**



		HeartSave PAD	HeartSave AED	HeartSave AED-M
<b>Defibrillation</b>				
Impulse shape:	two-phase, current-controlled impulses, external	•	•	•
Energy	140 – 360J according to patient impedance	•	•	•
Shock cycle time	usually 20 seconds	•	•	•
<b>ECG</b>				
Derivation	Eindhoven II	•	•	•
Patient resistance	23-200 Ohm	•	•	•
Heart rate	30-300 per min	•	•	•
<b>VF/VT detection</b>				
VF/VT detection		•	•	•
Analysis time	7-12 s	•	•	•
VF/VT threshold	200 µV	•	•	•
Asystole threshold	<200 µV	•	•	•
Artefact detection		•	•	•
Pacemaker detection		•	•	•
<b>Monitor</b>				
Model	LCD, blue mode			•
Dimensions	95 x 72 mm (diagonal 4.7"/120 mm)			•
Resolution	320 x 240 pixels (pixel size 0.36 mm x 0.36 mm)			•
Battery capacity display				•
Speed	25 mm/s			•
Sensitivity	10 mm/mV			•
User information	Language instructions, heart rate, number of defibrillations, ECG curve, number of detected VF/VT, total resuscitation time			•
<b>Disposable electrodes</b>				
Adhesive electrodes (hands free)		•	•	•
Shelf life	36 months	•	•	•
Cable length	1.5 m	•	•	•
Active electrode surface	164 cm <sup>2</sup> overall	•	•	•
Storage conditions	0°C ... 50°C	•	•	•
<b>Data management</b>				
Removable memory	CF card	•	•	•
Data/voice recording	at least 100 h data and voice recording	•	•	•
Voice recording can be activated/deactivated				•
Read out software		(•)*	•	•
<b>Power supply</b>				
<b>Battery 3</b>				
Model	LiMnO <sub>2</sub> , 15 V, 2 Ah, service life 3 years	•		
Discharges/shocks	100 @360J	•		
<b>Battery 6</b>				
Model	LiMnO <sub>2</sub> , 15 V, 2.8 Ah, service life 6 years		•	•
Discharges/shocks	200 @360J		•	•
Monitoring	20 h			•
<b>Environmental conditions</b>				
Operating conditions	0°C ... 50°C (30...95% rel. humidity without condensation, 700 ... 1060 hPa)	•	•	•
Storage conditions	-20°C ... +70°C (30...95% rel. humidity without condensation, 500 ... 1060 hPa)	•	•	•
<b>Resuscitation guidelines</b>				
AHA or ERC at factory		•	•	
Selectable AHA/ERC				•
<b>Approval</b>				
Standards	IEC60601-1:1988+A1:1991+A2:1995 (Electrical Safety of Med. Electrical Devices)	•	•	•
	IEC60601-1-2:2001 (EMC standard)	•	•	•
	IEC60601-1-4:1996+A1:1999 (Programmable electrical medical systems)	•	•	•
	IEC60601-2-4:2002 (Defibrillator standard)	•	•	•
	EN1789:2003 (Ambulance standard)	•	•	•
Protection class	IP55	•	•	•
<b>Dimensions</b>				
Height x Width x Depth	25 cm x 28 cm x 9 cm	•	•	•
Weight without/with power supply	approx. 2.0 kg/approx. 2.5 kg	•	•	•
Warranty	24 months on AED devices	•	•	•

\* optional



