



**corpuls®**

FOCUS - ON - PATIENTS

THE CORPULS REVOLUTION OF THE ECG!  
**22**  
LEAD ECG  
MORE AT CORPULS.WORLD

## SYNCHRONISED RESUSCITATION

Smart hardware collective.  
More performance through inter-connected devices

## AUTHENTIC TRAINING

New hard- and software solutions for more realistic mission scenarios

## DIGITAL INTELLIGENCE

The rescue chain is now a network:  
Future-proof telemetry & data management



THE NEXT GENERATION OF CORPULS 3

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## DEAR READER,

For almost 40 years, the **corpuls** brand has stood for sustainability, quality, user-friendliness, courage, social responsibility – and above all: Innovation.

The continuous development and synergy of the **corpuls** product world is crucial to the core of the brand. Every year we surprise our customers and the market with new products, solutions and innovations. Emergency and intensive care medicine around the world have almost become used to it. And yet 2020 is a very special year for us.

Never before have we brought so many innovations to the market: touch technology for **corpuls3**, the wireless synchronisation of resuscitation between **corpuls3** and **corpuls cpr**, the introduction of the 22-lead ECG in the emergency services, new telemetry and data management solutions and much more. Some of the most ambitious product visions, which we initially classified as futuristic scenarios, have now become a reality.

This is thanks to all the fantastic colleagues who work every day to make **corpuls** products better, smarter and more robust – in order to provide life saves all over the world with the best possible medical equipment.

Challenge us further – we will not disappoint you in the future either. We will keep surprising you. That is our DNA.

Best regards,

**Iris Klimmer**  
CFO

**Dr. Christian Klimmer**  
CEO

**Klaus Stemple**  
CTO

# CAT

## THE NEXT GENERATION OF CORPULS3

The corpuls3 is not only a device – it is a 3 module system:

- Monitoring Unit**
- Patient Box**
- Defibrillator | Pacer**

The modules can be separated at any time, as and when required. They communicate wirelessly, eliminating annoying cables.

The corpuls3 adapts optimally to the users needs. Legendary and still unique, the corpuls3 is used successfully by hundreds of organizations around the world.

### COMMUNICATION PROFESSIONAL

The built-in connectivity functions such as 4G modem, WLAN or LAN are ideal for telemedicine and the corpuls communication platform corpuls.mission.

The corpuls3 is available in three versions:

- corpuls3 TOUCH
- corpuls3 CLASSIC SLIM
- corpuls3 CLASSIC

### SPECIFICATIONS

- Transflective **8.4" Display**, with optional **Touch**
- **Communication profile** with 4G, Bluetooth, WLAN or LAN
- **Wide printer (106 mm)**
- **Weight:** 6.5 kg (corpuls3 SLIM, basic configuration)
- **Dimensions** of complete device (WxHxD): 30.5 cm x 29.6 cm x 19.5 cm (corpuls3 SLIM CLASSIC & TOUCH)
- **Extremely high dust and splash protection (IP55)**
- **Operation range:** -20 °C bis +55 °C (basic functions: ECG monitoring, defibrillation)
- **DIN EN 1789**
- Conforms with selected sections of the international **Standard for Airborne Equipment** RTCA DO 160 G
- Conforms with selected sections of the **US Military Standard MIL STD 810 G**



► The unique wireless technology allows the components to communicate with each other as though they were physically connected.

### MODULAR AND UNIQUE

- **Constant Monitoring**  
From the mission site to the hospital
- **Constant monitoring from a safe distance** (for example; in CT)
- Better **ergonomics** for patient transport by separating the modules
- Increases **patient safety** by recording and storing parameters in direct proximity to patients
- More **flexibility** at the mission site due to the separation of different tasks: Display, data recording and therapy

► Illustration of the corpuls3 TOUCH.



► Our corpuls3 CLASSIC SLIM is still available.

# THE MONITORING UNIT

The Monitoring Unit is the control centre of the **corpuls3**. At just 2.9 kg, including the battery and printer paper, it is about as thick as a newspaper and can be comfortably held in one hand.

## FULL CONTROL

Up to 6 curves and 13 vital parameters can be displayed simultaneously on the brilliant 8.4" display.

Fully customisable, freely namable and – in case of the NIBP display – with quality indicator. In addition, up to 6 curves can be printed in real time.

## OPERATING CONCEPT "TOUCH 'N DIAL"

For the **C3T**, we have implemented a new operating concept – with the aim of combining the best of the two operating worlds.

The result: **Touch 'N DIAL**

- On the one hand, classic operation using buttons and JogDial
- On the other hand, intuitive operation using touch.

Because there are mission where either one or the other mode works more reliably. This is the exact aim of this concept: optimal operation at the right moment.

And in the end, it is also a safety aspect: If touch does not work as expected, operation via buttons and JogDial is always possible, especially in the case of a resuscitation.

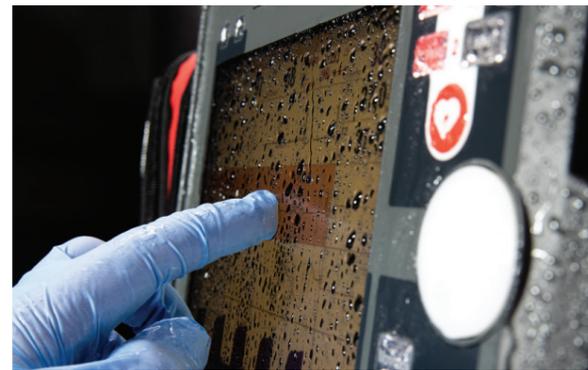
## EXTREMELY ROBUST TOUCH TECHNOLOGY

Not all touchscreens are created equal. The more demanding the circumstances, the more this statement applies. That is why we rely on the last generation of touch controllers.

Thus, making the **C3T**'s touch display

- **insensitive to liquids** and
- **safe to operate** with disposable gloves.

Together with the high-quality bonded display, you get a device with optimal contrast, little reflection and therefore the best possible usability.



► **TOUCH 'N DIAL** on the **C3T**: Operation via JogDial or optionally via touch.



- 4G modem, WLAN, LAN port
- Large, transfective 8.4" colour display, optional with touchscreen
- Only 2.9 kg
- Shock protection
- (In addition to the touchscreen) softkeys and function buttons
- Configurable views
- Wide printer (106 mm)

Easy 1-2-3 operation 1-2-3 Integrated insurance card reader

Intuitive operating concept with JogDial

► Illustration of the **corpuls3-Touch Monitor**.

# corpuls control

## THE POWER OF THE CORPULS3 ON YOUR WRIST



- 2.45" TFT multi-touch display
- BT connection to corpuls3
- Up to 10 hours runtime
- Display and confirmation of alarms

**corpuls control** is a revolutionary add-on product for the **corpuls3**.

The **corpuls control** is the "shrunk" **corpuls3** monitor for your wrist. Just like its big brother – it shows a variety of vital parameters and alarms. These can be confirmed on the **corpuls3** via **corpuls control**. It can easily be worn over a jacket or overalls. If the patient monitor is not within reach quickly enough, **corpuls-control** is the solution.

The TFT multi-touch display can also be operated with disposable gloves.

### SPECIFICATIONS

- Up to **6 curves** and **13 vital parameters**
- Diagnostic **12-lead ECG preview**
- **Quick access** to important menu items via 7 softkeys and function buttons
- **1-2-3 operation** in defibrillation modes
- **Wide printer** (106mm) with simultaneous real-time printout of up to 6 curves
- **4G modem**, WLAN or LAN port for **data transmission/telemedicine**
- All-around **impact protection**
- **Weighs** only 2.9 kg
- **Dimensions** (WxHxD): 30.5 cm x 29.5 cm x 12 cm

### BRACKET

- **Slim installation depth and lightweight**
- Also fits **Monitor and Patient Box combination**
- **12 V DC**
- **DIN EN 1789**



# THE PATIENT BOX

The Patient Box is the "heart" of the system. Here, all vital parameters and measured values are collected, measured and stored. Values recorded via pre-connected sensors are sent wirelessly and in real time to the monitoring unit. There they are displayed and/or processed.

## CONSTANT COMPANION

Due to its low weight (between 1.1–1.4 kg depending on equipment), the patient box is so compact that it can remain with the patient for transport.

This also means that all the sensors and cables can remain with the patient. Thus keeping them out of the way and enabling seamless monitoring during patient transport – e.g. through a narrow staircase.



► The small screen is found on the front of the patient box.

The Patient Box can be operated completely independently. The backlit monochrome display enables patient observation even without a Monitoring Unit (including voice recording and acoustic alarm).

All data is saved for transfer later.

### Data export via:

- Bluetooth
- Compact Flash

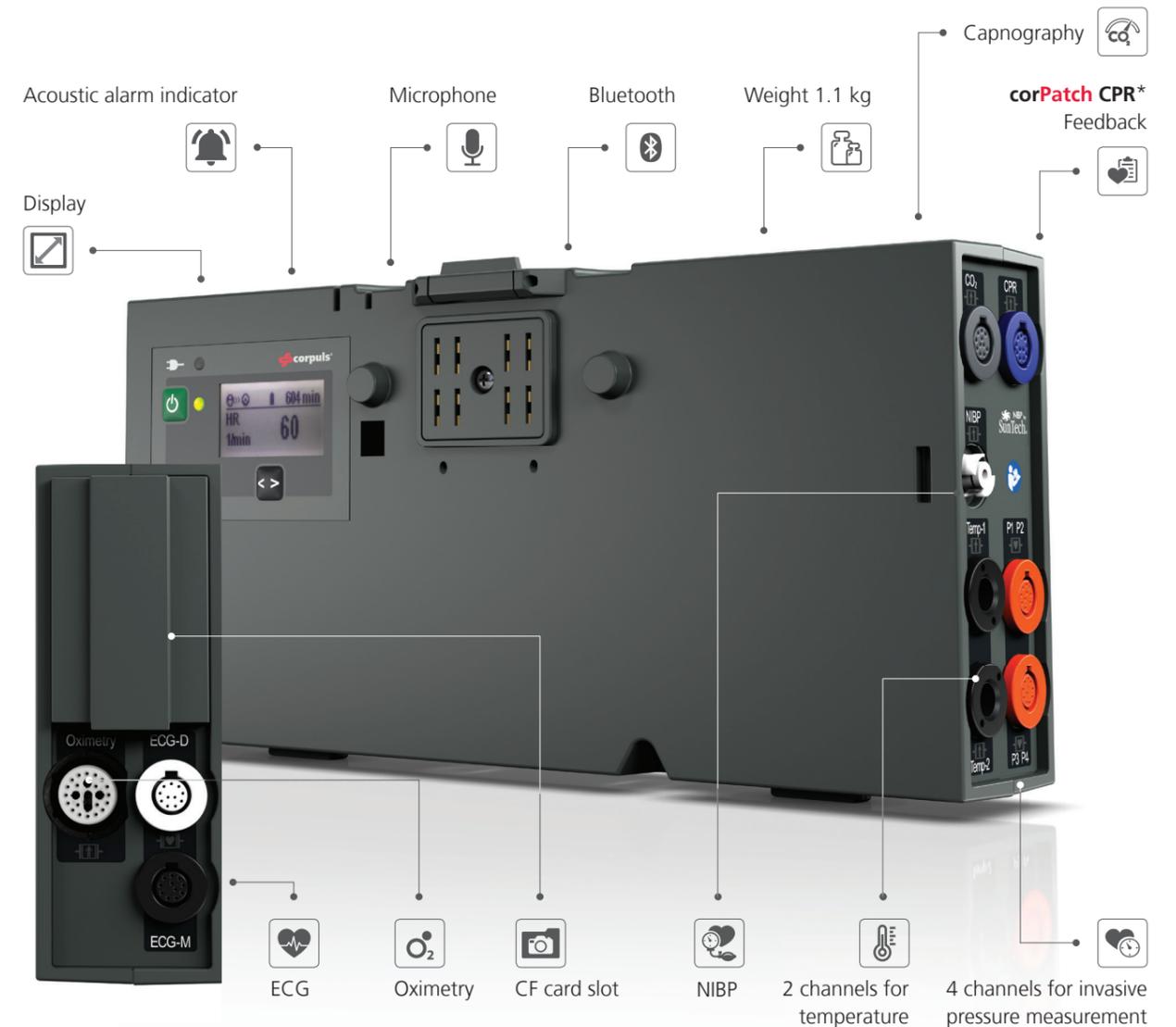
# PATIENT BOX BAG XL



What would the heart of the system be without the optimal packaging? A well thought-out accessory bag for all cables and sensors brings calmness and ease to a stressful job. Together with PAX® we have optimised and improved the accessory bag based on our experience over the past few years.

The new Patient Box Bag XL offers even more storage space, especially for additional NIBP cuffs and CO<sub>2</sub> cuvettes.

If you operate the corpuls3 in a basic configuration, the standard version is still available.



► Illustration of the corpuls3-Touch Patient Box.

## SPECIFICATIONS

- 12-lead diagnostic ECG, heart rate
- ECG-Analysis and Information Software
- Masimo Rainbow SET® Technology for SpO<sub>2</sub>, PP, PI, SpCO, SpMet, SpHb
- Non-invasive blood pressure measurement (SunTech®)
- Capnography with mainstream technology capONE®
- corPatch CPR-Feedback\*
- 2 channels for temperature measurement
- 4 channels for invasive pressure measurement
- Display for vital parameters, remaining time and alarms
- Acoustic alarm indicator
- Microphone for audio recording
- Bluetooth and CompactFlash®
- Weight: 1.1–1.4 kg
- Dimensions (WxHxD): 26.5 cm x 13.5 cm x 5.5 cm

## BRACKET

- Mounting solutions for common stretcher systems
- Easy attachment and release
- 12 V DC
- DIN EN 1789



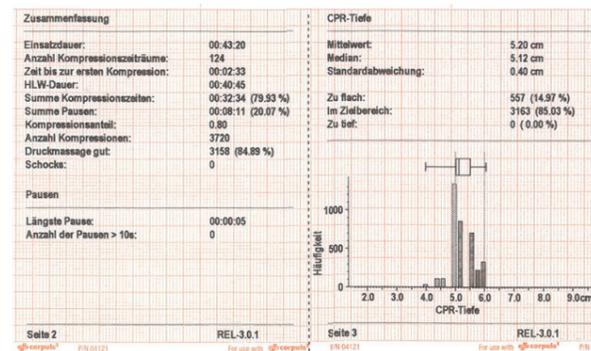
\*corPatch-CPR is a licensed product of the ZOLL Medical Corporation

# THE DEFIBRILLATOR | PACER

The modular design of the **corpuls3** allows complete mechanical separation of the Defibrillator/Pacer. The modules remain wirelessly connected. As a result, the weight of the **corpuls3** system can be significantly reduced – ideal for better mobility and flexibility in a time-critical transfer of the patient e.g. from ambulance to hospital. This allows shock delivery from a safe distance via the Monitoring Unit (using **corPatch** therapy electrodes).

## SPECIFICATIONS

- **Biphasic, rectangular waveform**, impedance compensated
- **2 to 200 Joule**, configurable energy protocol
- **AED and manual defibrillator**
- **AED protocol** according to the current Guidelines, update-able anytime
- Pacer with **FIX-, DEMAND-** and **OVERDRIVE** mode
- **Pre-connected corPatch therapy electrodes** in separate bag
- **Up to 200 shocks** with fully charged battery
- Use with **hard paddles** as well as **internal shock spoons** also possible
- **Weight: 2.5 kg (corpuls3 SLIM)**
- **Dimensions (WxHxD): 28 cm x 22 cm x 12 cm**



► The "CPR Summary" can be printed out on site immediately after use. Making an immediate debriefing of the resuscitation possible.



► Illustration of the **corpuls3-Touch** Defibrillator/Pacer.

## corPatch CPR\* FOR A BETTER QUALITY OF RESUSCITATION



- **Increased resuscitation quality** through immediate feedback on compression depth and compression rate
- **Reliable application** via adhesive surface
- **Easy positioning**
- **Data analysis with corpuls.manager** for mission debriefing and training



► The defibrillator is optionally available with hard paddles and 30°-swivelling base.

## BRACKET

- **One-hand release** via the handle
- **Self-locking mechanism** activated after 10 seconds
- **12 V DC**
- **DIN EN 1789**



# corpuls cpr

## THE STRONG ARM THAT SAVES LIVES

As with all **corpuls** developments over the past 40 years, our foray into mechanical chest compression is one thing above all: **unique**. During the construction of the **corpuls cpr** we focused on two things: The complete rescue chain from preclinical to air rescue to hospital as well as the shortest possible hand-off time. This is how we created a device that is virtually unrivaled in terms of ergonomics and performance.

## INDIVIDUALISED THERAPY

The **corpuls cpr** arm is aligned and fixed above the patient with just one lever. During the therapy the **corpuls cpr** checks the position of the stamp after each ventilation break or after 100 compressions (continuous mode). If the thorax has collapsed due to the preceding compressions, the **corpuls cpr** automatically corrects the distance between the stamp and the thorax. Thus ensuring that the set compression depth is always achieved.



## THE RIGHT BOARD FOR EVERY USE

All boards are made of carbon and are therefore **radiolucent** as standard. They are also very **easy to clean** thanks to their smooth surface.



### QUADBOARD

- Specifically developed for **hospitals mission**
- Large handle for easy positioning under patients



### RECBORD

- Specifically developed for use in **emergency services and preclinical setting**
- Compatible with all common stretcher systems
- Fastening straps with magnetic clasp and fastening ring for secure fixation of the patient



### SCOOPBOARD

- Ideal for **technically demanding operations with a scoop stretcher**
- Compatible with all common stretchers
- Fastening straps with magnetic clasp and fastening ring for secure fixation of the patient



### SPECIFICATIONS

- **Weight:** 5.5 kg (arm with battery and stamp)
- **Battery:** Lithium-Polymer-Battery with LED charge status indicator in 20% increments
- **Battery running time:** up to 90 min
- **Battery charging time via magnetic plug:** (no therapy)
  - 0 – 80 %: 105 min
  - 80 – 100 %: 30 min
- **Bluetooth and NFC**
- **Battery life:** max. 300 charging cycles
- **Intuitive user interface:** Therapy Start/Stop button with alarm function and 4 softkeys
- **Simultaneous display** of operating mode, compression depth, compression rate, time/therapy time and remaining battery runtime shown in minutes and percentage

### STAMP

- **Two sizes available**
- **Re-usable**
- **Easy to clean**

### BAG & BACKPACK FROM PAX®

- **Tailor-made** for the **corpuls cpr**
- **Room** for all the accessories (stamp, reserve battery, external mains converter)
- **Board storage compartment**
- **Viewing window** for charge status



# EFFECTIVE – SCIENTIFICALLY CONSIDERED

Studies were conducted in order for the **corpuls cpr** to meet the high demands placed on the name "**corpuls**". Tests with mechanical thorax models and animals show that the **corpuls cpr** was fundamentally able to produce a higher, mean arterial pressure, higher blood flow and thus higher coronary perfusion pressure than a chest compression device from a competitor company.

## ACCESS FROM ALL SIDES

In order to be able to effectively treat a patient with resuscitation – regardless of whether at an emergency site or in a cath lab – free access to the thorax is essential.

When using the recboard, the **corpuls cpr** can be flexibly positioned at 4 locations around the thorax. Also, there is no weight restriction for patients - and a chest height of up to 34 cm is possible. The compression depth, which can be freely adjusted between 2 and 6 cm in increments of 1 mm, and

the compression rate, which can be adjusted between 80 and 120 compressions per minute, make it possible to use the **corpuls cpr** even on children from 8 years of age.



► A chest height of up to 34 cm also enables the treatment of obese patients.



## SPECIFICATIONS

### SYNCHRONISATION

- Control from the **corpuls3** via Bluetooth is possible

### COMPRESSION PARAMETERS

- Compression rate: 80 to 120 compressions/min
- Compression depth: 2 to 6 cm
- Therapy modes: 30:2 | 15:2 | continuous (intubated)

### PATIENT PARAMETERS

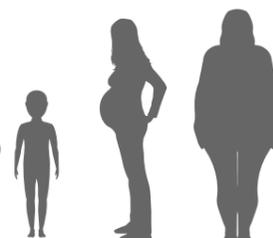
- Thorax height: 14 to 34 cm
- Thorax width: no restrictions
- Patient weight: no restrictions

### GENERAL SPECIFICATIONS

- Colour display 2.4" with LED-backlighting
- Operating temperature: -20 °C to +45 °C
- Dust- and splash proof (IP54)
- RTCA DO 160 G (EMV-tested)

### SPECIAL FEATURES

- Treatment of **obese patients**, **pregnant women** and also **children** (from 8 years of age) is possible



Children from 8 years of age Pregnant women Obese patients

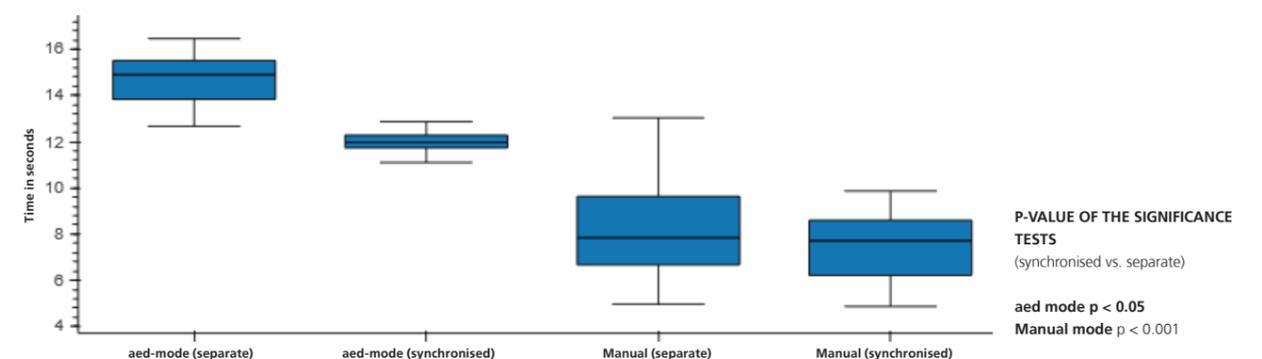
# SYNCHRONISED THERAPY

Resuscitation can quickly become stressful. Thanks to the Bluetooth connection, the **corpuls cpr** is effectively the fourth module of the **corpuls3**. The team is supported by the remote control of the **corpuls cpr** via the **corpuls3**. Treatment can be safer and the hands-off time reduced\* thus increasing the patient's chance of survival.

- Shorter Hands-off time
- Perfect in **tight spaces** and during transport (land/air)
- Easier and faster **operation**
- Increased **safety**
- Data transmission to **corpuls3** as well as **corpuls.mission** and **corpuls.manager**
- Can be used in **aed- & manual modes**



### \* REDUCTION OF THE HANDS-OFF TIME WITH SYNCHRONIZATION



# ECGmax

## THE CORPULS-REVOLUTION OF THE ECG

Over 20 years ago, **corpuls** brought the 12-lead ECG to the emergency services for the first time and it has been the gold standard in ECG diagnostics ever since. **Until now.**

In 2020 **corpuls** revolutionised the ECG again: With the **ECGmax** you not only get the usual 12, but 22 leads and thus a much more comprehensive picture of the heart muscle including the posterior wall and the right side. The current European Society of Cardiology guidelines recommend that these be examined if possible.

No additional effort is required and no electrodes have to be attached or positioned.

- Broadened diagnostics with **22 leads**
- **Posterior leads V7-V9**
- **Right cardiac leads V3r-V6r**
- **Orthogonal leads X, Y, Z** and **Vectorloops**
- **Only 10 electrodes**, extremities and chest leads

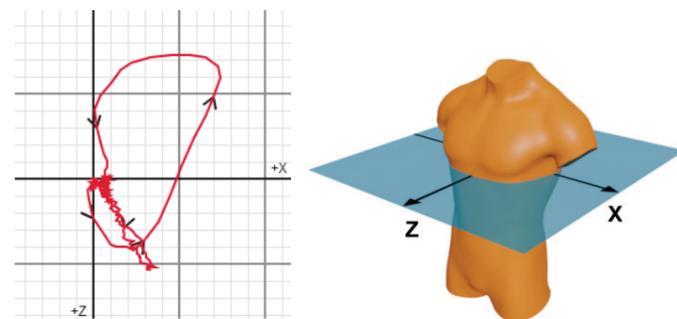


► Possibility of automatic forwarding as PDF to tablets and smartphones.

## VECTORLOOPS

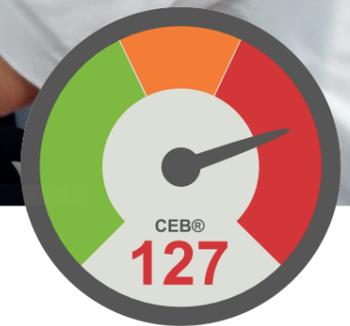
Vectorloops according to Frank, consider the electrical conduction in the heart as a rotating dipole. The course of the peak of this vector is spatially represented as a loop in a three-dimensional individual coordinate system.

The loops correspond to the P wave, the QRS complex and the T wave. With a healthy myocardium, the loops are regular and "fluid looking", with a dysfunction the conduction of the dipole is rather irregular and jagged.



- Electrical conduction as a **rotating dipole**
- **Represented** as a loop in the 3D coordinate system
- **Loops** correspond to the P wave, the QRS complex and the T wave
- **Healthy loops** are more regular and "flowing"
- **Dysfunction** shows as irregular and jagged

► Example representation of the horizontal conduction



## CEB®

## THE CARDIAC ELECTRICAL BIOMARKER

In addition, **ECGmax** can calculate the **Cardiac Electrical Biomarker CEB®** from the same electrodes. **The three colour-coded areas of the CEB®** – normal, conspicuous, abnormal – make interpretation particularly easy. The user can immediately recognise whether myocardial ischemia is present – with comparable sensitivity and specificity to troponin.

- **Simple interpretation** using the traffic light concept
- **Measured value is comparable to troponin**
- **Fast reaction by measuring** the electric field
- **High sensitivity and specificity**
- **No additional electrodes required**
- **Continuous value**
- **Non-invasive measurement**

## SELECTED PUBLICATIONS ON THE CEB®

Extensive studies impressively prove the effectiveness of the **CEB®**.

Received: 8 November 2017 | Accepted: 2 February 2018  
DOI: 10.1111/anes.12538

ORIGINAL ARTICLE WILEY

**Diagnostic value of the cardiac electrical biomarker, a novel ECG marker indicating myocardial injury, in patients with symptoms suggestive of non-ST-elevation myocardial infarction**

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<sup>2</sup>University Heart Center Hamburg, Clinic for General and Interventional Cardiology, Hamburg, Germany  
<sup>3</sup>Institute for Medical Engineering, Linde

**Background:** The cardiac electrical biomarker (CEB) is a novel electrocardiographic (ECG) marker quantifying the dipolar activity of the heart with higher levels indicating myocardial injury.  
**Methods:** We prospectively enrolled 1097 patients presenting with suspected non-ST-elevation myocardial infarction (NSTEMI) to the emergency department (ED).  
**Results:** 973/1097 (89%) were recorded at presentation, and the CEB value was recorded.

► Strelbel, I et. al., Ann Noninvasive Electrocardiol. 2018.

**Automated Analysis of the 12-lead ECG in the Emergency Department: Association Between High-sensitivity Troponin I and the Cardiac Electrical Biomarker**

Larisa G. Tereshchenko, MD, PhD,\* David Gatz, BS,\* Albert Feeny,\* and Frederick K. Korley, MD†

**Abstract:** Timely detection of myocardial injury is essential for appropriate management of patients in emergency department (ED) evaluated for acute myocardial infarction. A novel electrocardiogram (ECG) metric, the Cardiac Electrical Biomarker (CEB), uses eigenmode modeling of the 12-lead ECG and quantifies dipolar vs. multipolar forces. The goal of this project was to study association between the CEB and high-sensitivity troponin I (hsTnI). We conducted a retrospective study of patients, evaluated in the ED for acute myocardial infarction (n = 411; 57.6 ± 12.2 years; 186 (45%) men, 266 (64%) African-American). Routine 12-lead ECG and hsTnI were measured at presentation and at 3, 6, and 9 hours after the initial measurement. The CEB was measured by the VectraplexECG System (Vectra, Inc., Totowa, NJ). Patient-specific longitudinal analysis was performed to study association between the CEB with hsTnI changes over time. The CEB indicated myocardial injury in 116 (28.2%) study participants. hsTnI was significantly elevated during ED observation period in patients with myocardial injury, diagnosed by the CEB [median (interquartile range), 10.3 (5.2-31.4) vs. 6.3 (3.5-16.5) ng/L; P = 0.002]. In a mixed-effects linear regression adjusted for age, race, and sex, increasing hsTnI was associated with the CEB elevation [beta-coefficient, 0.071 (95% confidence interval, 0.008-0.134); P = 0.027]. In conclusion, in patients in ED evaluated for acute myocardial injury, increasing values of hsTnI were associated with increasing values of the CEB, suggesting that myocardial injury is the mechanism that underlines acute changes in the CEB.  
**Key Words:** electrocardiogram, emergency medicine, acute coronary syndrome, cardiac electrical biomarker  
(Crit Pathways in Cardiol 2014; 13: 25-28)

**METHODS**  
**Study Population**  
We retrospectively analyzed data from an ongoing prospective observational cohort study of patients in ED evaluated for AMI. Since January 2012, the original cohort enrolled consecutive patients who presented with symptoms suggestive of acute coronary syndrome (ACS) such as acute chest pain, shortness of breath, or other sensations presumably caused by myocardial ischemia. Patients 25 years or older were eligible for enrollment if treating clinicians suspected AMI and ordered an ECG and troponin measurement for further evaluation. Serial ECG and troponin measurements were performed at presentation and at 3, 6, and 9 hours after presentation at the discretion of treating clinicians. Each time, blood samples were drawn to measure troponin with the clinical assay (Access II *Access II* assay; Beckman Coulter, Brea, CA), an additional test

► Tereshchenko, LG et al., Crit Pathways in Cardiol 2014; 13: 25-28



# corpuls.mission

**Corpuls.mission** is a medical communication platform that puts the patient at the center. **corpuls** brings the knowledge together where you need it most: on the mission. Adequate patient treatment requires, above all, specific knowledge. However, the complexity of medicine cannot rest on the shoulders of a single specialist. By combining medical data, chat, video and documentation, you will find all relevant information in one place.

Designed for the special requirements of preclinical missions, **corpuls.mission** stands out from classic communication solutions. View diagnostic ECGs and photos of medication plans next to the live curves from the **corpuls3**. And all this with the usual **corpuls** quality and data protection "Made in Germany".

# corpuls.manager

The mission does not end when the case is closed. The data collected helps you to continually improve. This not only benefits future patients, but also the profitability of your company. With **corpuls.manager** you bring this 'loose' data together and obtain new knowledge from it and you can keep an overview of your data.

Immerse yourself in the details of a single mission or look at all missions as a whole. Automatic mission upload provides you with the most up-to-date information, displayed in clear illustrations and diagrams. Supported by artificial intelligence, you can discover new correlations and save time evaluating.



LIVE

- **Smart telemedicine** with live connection
- **ECGmax:** Makes ECGs with **22 leads, Vectorloops and CEB®** possible
- **Automated forwarding and flexible interfaces** for data export
- **Monitor** multiple devices and **visual representation** of events
- **Vital parameters and curves in real time**



CONFERENCE

- **Patient orientated communication**
- **Video consult:** Live consultation from physicians or specialists via videophone and chat
- **Picture, video and voice messaging**
- Available for **Web, iOS and Android**
- **Tactical units** (e.g. dispatch, ambulance, crew) instead of individuals allow easy selection of the required communication partner



REVIEW

- **Mission debriefing**
- **Detailed mission evaluation**
- Display of **curves and parameters**
- Evaluation of **resuscitation quality**



ANALYSE

- **Complete mission data of all your corpuls devices** in one place
- New insights through **business intelligence**
- **Powerful search and filter functions**
- Organisation-wide **quality management**
- Support for **research and training**



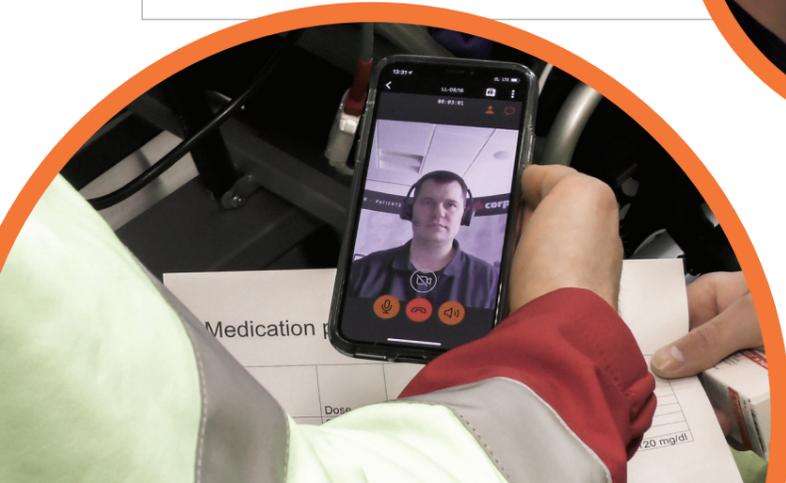
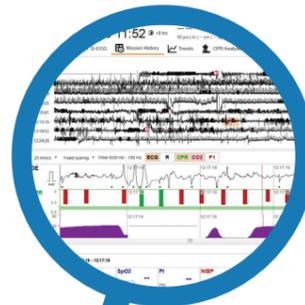
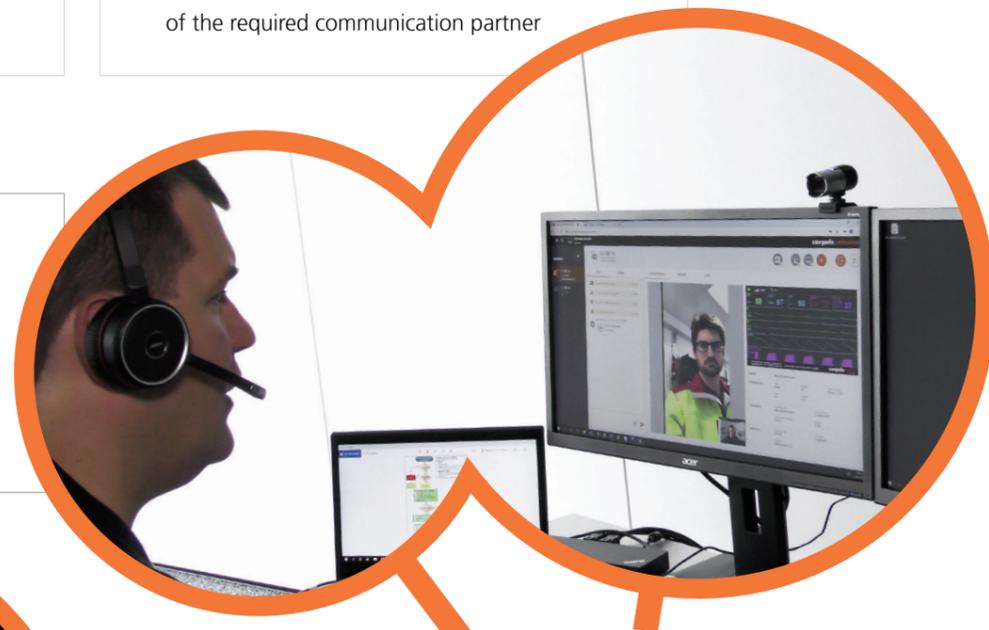
REPORT

- **Collaborative mission documentation**
- From medical **history to handover**
- **A report** from all participants (e.g. ambulance and tele-physician)



ADMIN

- **Connected device management**
- **Over-the-air-updates**
- **Automatic status reports**



# corpuls1

## SMALL, COMPACT AND VERSITILE

Small, light and compact and with the power of it's big brother the **corpuls3**. An extremely compact but fully-fledged Defibrillator/Patient Monitor that is always right for the job when size and weight matter.



### RESUSCITATION

Depending on the situation, use the handy **corpuls1** as an automatic external defibrillator (AED) or as a manual defibrillator – and together with **corPatch** CPR-Feedback, it ensures the best possible care.

### MONITORING

The intuitive user interface ensures easy operation. On the 5.7" screen you can keep an eye on the ECG, heart rate and pulse oximetry. Up to 3 curves and 4 parameters are displayed.

### PACER

The **corpuls1** includes (optionally) a built in pacer with FIX and DEMAND modes for the therapy of arrhythmias.

### PULSE OXIMETRY

The integrated pulse oximeter (optional) enables the monitoring of oxygen saturation, pulse rate and plethysmogram.

### MASIMO® RAINBOW TECHNOLOGY

The SpCO measurement (optional) enables simple and early detection of possible carbon monoxide poisoning.

## SPECIFICATIONS

### GENERAL SPECIFICATIONS

- Weight: 2.2 kg (basic configuration, incl. battery)
- **Measurements (WxHxD):** 26 cm x 17 cm x 7 cm
- **Dust and splash-proof (IP55)**
- **Operation range:** – 20 °C bis + 55 °C (basic functions: ECG monitoring, defibrillation)
- **Audio recording**
- **Power supply** via lithium-ion battery; 12 V DC, 100 to 250 V AC with AC adapter
- **RTCA DO 160 G** (airborne equipment)
- **Vibration- and shockproof** according to DIN EN1789

### PATIENT MONITORING

- **5.7" colour display**, back-lit
- **3 curves** and up to **4 vital parameters**
- **6-lead ECG**
- **corPatch** CPR-Feedback
- **Masimo® Rainbow® SET** for SpO<sub>2</sub>, PP, PI, SpCO, SpMet, SpHb (optional)

### DATA MANAGEMENT

- **SD-Memory card**

# corpuls aed

## MANOEUVRABLE, ROBUST AND INTUITIVE

The **corpuls aed** is a crucial part of the rescue chain. It safely guides trained users and laypersons through guideline adherent resuscitation and is available as fully or semi-automatic.

## SPECIFICATIONS

- **Fully or semi-automatic**
- **Emergency call button** with hands-free function (optional)
- **Backlit colour display**
- **corPatch** CPR-Feedback
- **Status transmission via SMS or WLAN** to **corpuls.manager**
- **Compatibility:** attached **corPatch-easy** therapy electrodes can simply remain on the patient when they are treated with corpuls devices
- **Dustproof & protected against hard water (IP66)**
- **Simple language selection & pictograms** (multilingual)
- **Battery life:** with full charge > 200 shocks at 200 J possible
- **Vibration- and shockproof** according to DIN EN1789



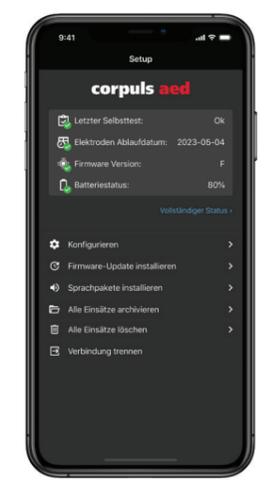
- Optional **Vehicle bracket** according to DIN EN 1789
- **Weight:** 1.9 kg
- **Measurements (WxHxD):** 25.5 cm x 21 cm x 5.8 cm

# corpuls.manager

The **corpuls.manager** app connects easily to the **corpuls aed** via WLAN. Allowing settings and parameters to be adjusted with little effort.

## FEATURES

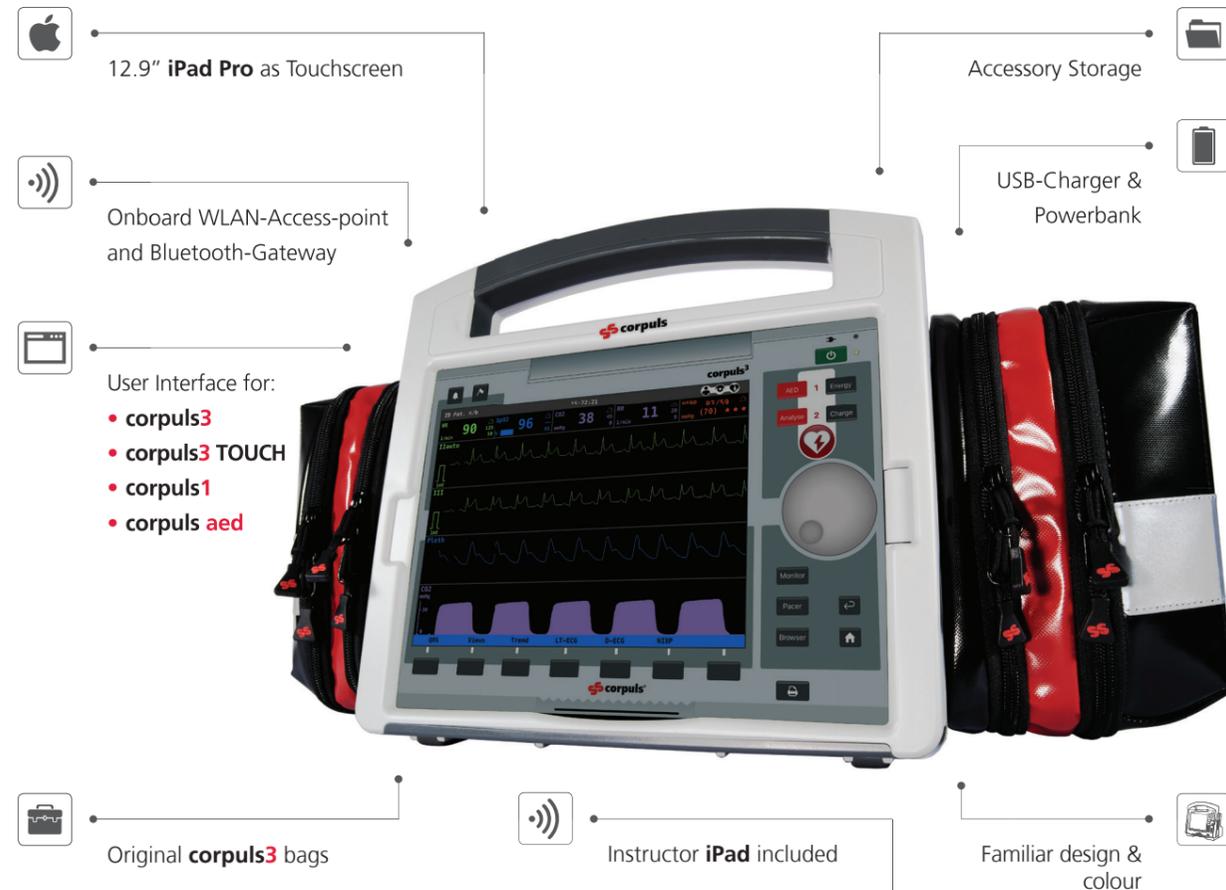
- **System check and status reports**
- **Configuration of parameters**  
Adjust energy, mode, automation etc. (including loading and saving a configuration)
- **Install updates and language packs**  
the required files are available via the app and do not have to be downloaded in the browser
- **Upload missions to the server**
- Available for **iOS and Android**



# corpuls simulation

## TRAIN HOW YOU FIGHT - FOR LIVES

If you want to be among the best, you have train daily in the most natural possible environment. This is especially true for teams that fight for the lives of patients. With **corpuls simulation** we bring 100% realistic scenarios to your training – for uninterrupted and concentrated training units.



### THE FACTS

- All the functions of the original device
- Realistic parameters and curves
- Status changes through events
- Original accessories
- Simulation consumables
- Scenario editor
- Current software
- Multiple languages available
- Safe training
- corpuls simulation community
- Bluetooth connection to corpuls cpr



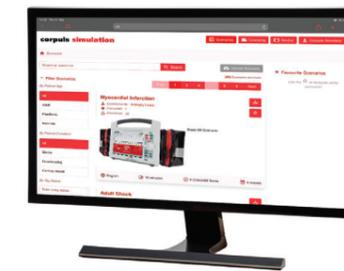
▶ The instructor controls the values and parameters via the included instructor iPad.

# corpuls community

## NETWORK WITH INSTRUCTORS FROM ALL OVER THE WORLD

Knowledge is the only resource that increases when you share it – the basic principle of the **corpuls simulation** community. It is precisely for this reason that we place so much value on networking and offering space to exchange ideas.

- Share simulation scenarios
- Exchange experiences
- Designing training concepts together
- Find like-minded people
- Device and license management



▶ Share your training and experiences in the corpuls simulation community.

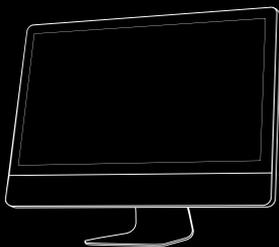
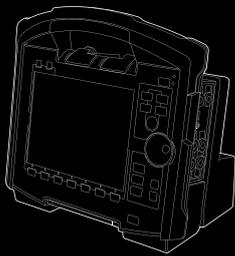
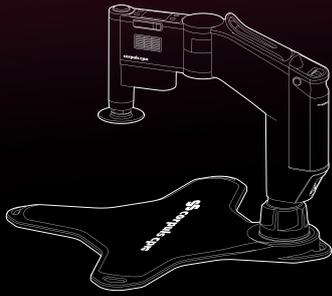
# ACCESSORIES

## PROGRESSEIVE & REALISTIC

- Residue-free removal  
removal of the reusable training electrodes with optimal adhesion to PVC torso
- Realistic feel to that of the original device (but clear differentiability)
- Functional CPR Feedback sensor  
with precise depth and rate measurement for optimal training result
- Practical accessory bag to protect the technology and with a lot of storage space



▶ The device and accessories can be stowed perfectly in the accessory bag from PAX.



For over 40 years, **corpuls®** has developed and produced innovative high-end equipment for emergency and intensive care medicine. Today, in our headquarters in Kaufering, over 300 hearts each beat around 60,000 times every work day while aspiring to meet the high standards of rescue workers from over 70 countries around the world.

**corpuls** defibrillators, patient monitoring systems and chest compression devices have set the standard since day one in the realisation of the most advanced insights in medical science, as well as in terms of innovation and ergonomics. They so guarantee reliable and trusted aid in the fight for human lives.



Manufacturer:

**corpuls | GS Elektromedizinische Geräte**

**G. Stemple GmbH**

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