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 TOUCH adapts optimally to the user's 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 gibt es in drei Ausführungen:
- corpuls3 TOUCH
- corpuls3 CLASSIC SLIM
- corpuls3 CLASSIC

SPECIFICATIONS
- Transflective 8.4” display, with optional Touch
- Wide printer (10,6 cm)
- Weight: 6.5 kg (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)
- Battery life 7-10 hours, according to settings and demand
- Operating environment:
  -20 °C to +55 °C
  (basic functions: ECG monitoring and 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

MODULAR AND UNIQUE
- Constant monitoring
  from the emergency site to the hospital
- Uninterrupted monitoring from a safe distance
  (e.g. CT scan)
- 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
THE MONITORING UNIT

The Monitoring Unit is the control centre of the corpuls3 TOUCH. At just 2.9 kg, including the battery and printer paper, it is compact 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 side, classic operation using softkeys or function keys and JogDial
• On the other side, 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 keys and JogDial is always possible, especially in the case of a resuscitation.

EXTREMELY ROBUST TOUCH TECHNOLOGY

Not your standard Touch. This is very important when the circumstances of the mission are more demanding. We rely on the latest generation of Touch control. The touch display of the corpuls3 TOUCH is

• Insensitive to liquids and
• Can be safely operated with disposable gloves.

Together with the high-quality bonded display, you get a device with optimal contrast and minimal reflection resulting in excellent usability.

4G modem, WLAN, LAN connection

Chip card reader

Only 2.9 kg

Large, transflective 8.4” colour display, opt. with Touchscreen

Shock protection

Softkeys and function keys in addition to touchscreen

Views configurable

Wide printer (106 mm)

Intuitive operating concept via jog dial
The Patient Box is the "heart" of the system. It collects, records, and stores all vital parameters and measurements. Values recorded via pre-connected sensors are transmitted in real time wirelessly to the monitoring unit, where they are displayed and/or processed.

**CONSTANT COMPANION**

Due to its low weight (between 1.1 and 1.4 kg, depending on features) the Patient Box is so compact that it can stay with the patient during transport. This also means that all the sensors and cables can remain on the patient. This not only keeps them out of harm's way, but also enables seamless monitoring – for example, when transporting a patient through a narrow stairwell.

The Patient Box can operate completely autonomously. The backlit monochrome display enables patient observation even without a monitoring unit (including voice recording and acoustic alarms).

All data can be stored for later transmission.

**Data export via:**
- Bluetooth Classic | BLE
- Mobile Network 4G-LTE & WLAN (in the monitoring unit)
- CompactFlash® Card via corpuls.manager

**RESPIRATION RATE FROM THE PLETH (RRp®)**

Respiration rate is an important vital parameter in Emergency Medicine. With Masimo®’s Respiration Rate from the Pleth (RRp®) feature, this can now be measured automatically via the pulse oximetry sensor.

Pressure changes in the chest, which are caused by respiration, among other things, cause a baseline variation in the plethysmographic waveform. The respiration rate (RRp®) can be derived from these changes in the plethysmographic waveform. This new parameter is a quick and easy tool to measure or monitor the patient's respiration rate.
The modular design of the corpuls3 TOUCH allows complete mechanical separation of the Defibrillator/Pacer. However, the modules remain wirelessly connected. This significantly reduces the weight of the corpuls3 TOUCH system, which improves the mobility and flexibility of the system during urgent patient transfers, such as from the ambulance to the hospital. In this configuration, the patient can be remotely shocked from a safe distance via the monitoring unit (in connection with the corPatch therapy electrodes).

The corpuls3 TOUCH Defibrillator/Pacer offers exactly what’s required in critical missions. Weight and size are reduced to the necessary minimum without any compromise in functionality. The pre-connected therapy electrodes and the optional accessory bag also optimise handling.
PERFECT TEAMWORK
SYNCHRONISATION OF CORPULS3 TOUCH & CORPULS CPR

This has long been our vision: the perfect interaction between corpus3 and corpus cpr during resuscitation. Our objective was to lift resuscitation procedures to a new level of quality. The corpus3 is primarily distinguished from other compact units by its revolutionary modular design. It can be divided into the monitoring unit, patient box and defibrillator/pacer. Synchronised therapy can greatly reduce the stress in the team. corpus3 TOUCH and corpus cpr act as one unit, they are integrated into the team and the two of them working together make the resuscitation procedure even more efficient. The hands-off time is significantly reduced and the patients' chance of survival is increased, even under very confined conditions.

SPECIFICATIONS corpus cpr

- Weight: 5.5 kg (arm with battery and stamp)
- Compression depth: 2–6 cm
- Frequency: 80–120/min
- Therapy mode: 30:2 | 15:2 | continuous
- Bluetooth and NFC
- Intuitive user interface: therapy start/stop button with alarm function and 4 softkeys
- Customisable therapy parameters
- Battery running time: up to 80 min
- Radiolucent boards
- Fast secure adjustment
- Children from the age of 8, pregnant women and obese patients can also be treated

When designing the corpus cpr, we focused on two things: A seamless rescue chain from out-of-hospital, to air rescue, to in-hospital - as well as the shortest possible hands-off time.

This is why the corpus cpr arm can be aligned and fixed over the patient with just one movement in just a few seconds. During the therapy the corpus cpr checks the position of the stamp after each ventilation pause or after 100 compressions when in continuous mode. If the thorax has collapsed, the corpus cpr automatically corrects the distance between the stamp and the thorax. Thus ensuring that the set compression depth is always achieved.

With three different boards made of radiolucent carbon, the user is optimally equipped for every mission.

The synchronisation means that the corpus cpr is virtually the fourth module of the corpus3 TOUCH and we are again a step closer to our target of a seamless rescue chain.
THE CORPULS REVOLUTION

Over 20 years ago, corpuls introduced the 12-lead ECG to the emergency services. It has been the gold standard in ECG diagnostics ever since. Now corpuls is revolutionizing the ECG again.

ECGmax 22-LEAD ECG

With ECGmax you get not only the classic 12, but 22-leads and thus 10 additional perspectives on the course of electrical activity in the heart muscle.

The current European Society for Cardiology (ESC) guidelines recommend examining the additional leads V7–V9 and the right cardiac leads V3r–V6r.

No additional effort is required and no other electrodes have to be attached or positioned. The additional leads are calculated on a server. They can be displayed and measured in corpuls.mission LIVE or forwarded to the recipient as a PDF by e-mail or fax via the corpuls Gateway.

GLASGOW ECG INTERPRETATION

The corpuls3 TOUCH has integrated the Glasgow ECG Interpretation Program. Since its development in the 1960s by Prof. Macfarlane, the program has been further refined and investigated in scientific studies. In addition to adults, the ECG interpretation of pediatric patients is also possible.

- Diagnostic support with 22-leads
- Posterior leads V7–V9
- Right cardiac leads V3r–V6r
- Orthogonal leads X, Y, Z and associated vectorloops
- Only 10 electrodes, extremities and chest leads
- Display on every corpuls3 with telemetry option

CEB® CARDIAC ELECTRICAL BIOMARKER

In addition, ECGmax can calculate the Cardiac Electrical Biomarker CEB® from the same leads.

To do so the electrical field of the heart is measured and the user can immediately recognize whether myocardial ischemia is present – with comparable sensitivity and specificity to troponin.

- Simple interpretation using the traffic light concept
- Correlation of the CEB® with troponin
- Fast reaction by measuring the electrical field
- Non-invasive measurement
- Continuous value
- High sensitivity and specificity
- No additional electrodes required

CONNECTIVITY

Various interfaces and connection options are available for the connection to the corpuls digital products, the data transmission is always encrypted. For the mobile phone connection, corpuls optionally offers additional security through M2M SIM cards. For local communication with an ePCR device, the corpuls3 TOUCH has a combined Bluetooth Classic and Bluetooth Low Energy (BLE) module, which enables the transfer of patient and master data, vital data, trends or the resting ECG as a PDF file.

- WLAN Interface (also for “Enterprise” networks)
- 4G LTE Modem (backwards compatible)
- M2M SIM cards for security via mobile connections through their own APN with connected VPN tunnel
- Combined Bluetooth Classic and BLE Module for local communication with an ePCR device

TELEMEDICINE & DATA MANAGEMENT

corpuls.mission and corpuls.manager are the optimal and digital complement to corpuls3 TOUCH. Missions become borderless in terms of space and time to support patient treatment on site and sustainably improve it for the future.

corpuls.mission LIVE

The telemedicine application corpuls.mission LIVE transmits data from the corpuls3 TOUCH in real time to any suitable computer connected to the internet - browser-based and yet secure. Thus, medical data can be shared live, no matter how far away the mission site is from the hospital or the specialist.

corpuls.mission CONFERENCE

The communication solution corpuls.mission CONFERENCE brings the specific expertise required to the treatment location - any time. The specialists required are connected to the mission site via chat, telephony or video telephony and relevant images, audio recordings, ECGs, etc., can be easily and securely shared – all with a native app.

corpuls.manager ANALYSE

The data management solution corpuls.manager ANALYSE centrally and automatically manages all the data from your corpuls device fleet and enables data upload from the corpuls3 TOUCH at the end of the mission. The filter, sort and search functions are ideal for quality management and controlling.

corpuls.manager REVIEW

With corpuls.manager REVIEW, you can review the mission form the corpuls3 TOUCH down to the second. Exactly what’s required for optimal debriefing and the best possible documentation for quality assurance.
**ENERGY MANAGEMENT**

The best energy management is one that the user doesn’t have to think about. **corpuls3 TOUCH** intelligent energy management fulfills this requirement precisely.

- Extremely powerful and identical batteries in all 3 modules
- No time-consuming manual charging and battery replacement required
- In compact mode, the battery reserves from the other modules are used

Simply remove the **corpuls3 TOUCH** from the charging bracket in the emergency vehicle and, even during long missions, there will always be enough power available to ensure comprehensive monitoring and therapy with the Defibrillator/Pacer.

**The individual corpuls3 TOUCH batteries can be exchanged if necessary.**

**BRACKETS**

**MONITOR**
- 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

**PATIENT BOX**
- 12-lead diagnostic ECG, heart rate
- ECG-Analysis and Information Software
- Masimo Rainbow SET® Technology for SpO₂, PP, PI, SpCO, SpHb, RR²
- Non-invasive blood pressure measurement (SunTech®)
- Capnography with mainstream technology capONE®
- 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

**COMPACT DEVICE**
- One-hand release via the handle
- Self-locking mechanism after 10 seconds
- 12 V DC (optional with power supply unit)
- EN 1789

**DEFIBRILLATOR**
- Biphasic, rectangular waveform, impedance compensated
- 2 to 200 Joule, configurable energy protocol
- AED and manual defibrillator
- AED protocol according to the current Guidelines, updatable 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 possible
- Weight: 2.5 kg (corpuls3 SLIM)
- Measurements (WxHxD): 28 cm x 22 cm x 12 cm
For almost 40 years, corpuls® has developed and produced innovative high-end equipment for emergency and intensive care medicine. Today, in our headquarters in Kaufering, over 400 hearts each beat around 80,000 times every work day while aspiring to meet the high standards of rescue workers from over 70 countries around the world.

Since day one, corpuls defibrillators, patient monitoring systems and chest compression devices have set the standard in the realisation of the most advanced insights in medical science, as well as in terms of innovation and ergonomics. Complemented by smart telemedicine and data analysis across devices, the corpuls system guarantees reliable and safe help in the fight for human lives.