corpuls³

life energy

corpuls

the next generation

the concept³

The **corpuls³** offers an entirely new and revolutionary design-concept compared with traditional compact defibrillator/monitoring devices.
It is designed as a complete modular system and can be split into:

Monitoring unit

Patient box

Defibrillator/Pacer unit

This means unrivalled ergonomics, functionality and flexibility:

With the Monitoring unit in your hand:
- **Take control of the situation!**

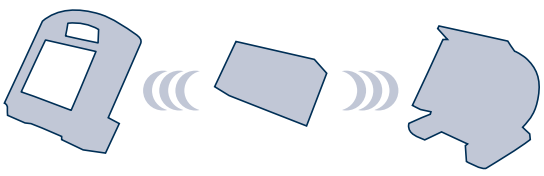
Attach the Patient box to the stretcher.
- **Eliminate cable trap and tangle!**

Leave the Defibrillator behind if it is not required.
- **Effective working!**

Semi modular use

Compact unit

Wireless communication



The unique wireless network-technology allows operation of the components independently as if they were physically connected.


corpuls³
AED
Energy
Analyse
Charge
Shock
MONITOR
PACER
BROWSER
APEX


corpuls³
ID
15.05.2006
320 min
SpO2
99
PP
70
NIBP
CO2
27
mmHg
l/min
AED
ANALYSE
D-ECG
NIBP

monitoring unit

Maximum mobility,
Simple user interface,
Fast diagnosis

The Monitoring unit gives the user control of the **corpuls^3**-system. Here you can configure your alarm limits, view and alter patient vital signs and document operations.
The detachable Monitoring unit guarantees easy handling yet provides a sophisticated solution at all times. Weighing only 2.7 kg (incl. battery) the unit is easy to operate when arm held. The contoured handle bar and all around protection ensures that the Monitoring unit will withstand even the harshest conditions.

Big color display
- 8.4'' crystal clear indoor/outdoor TFT display
- Up to 6 waveforms and all measured values of the vital parameters clearly displayed
- Individual configurable display views
- 12 lead Diagnostic ECG preview
- Excellent visibility and readability from a distance and in direct sunlight

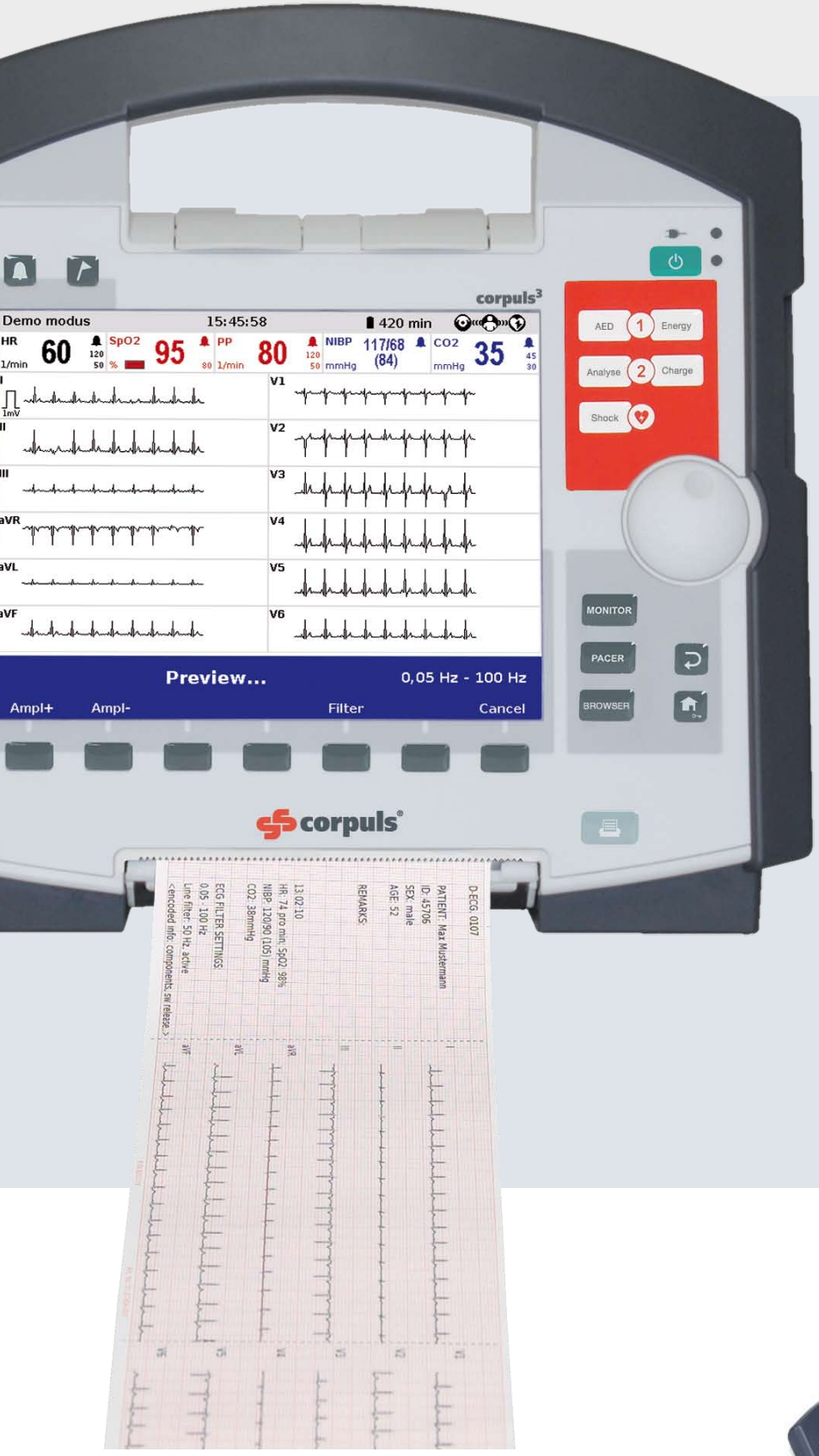
Soft keys
- Fast and comfortable operation through 7 soft keys
- Immediate access to all main functions

Wide thermal array printer
- Paper width: 106 mm
- Paper length: 22 m (roll)
- Real-time print-out of up to 6 leads simultaneously
- Printer set-up individually configurable
- Robust and low maintenance design

USB-interface, SIM-card interface and integrated modem for data transmission

Insurance card-reader

corpuls
the next generation



1-2-3 work-flow in defibrillation mode

- Easy and fast operation in defibrillation mode
- Switch from conventional mode to AED mode (and vice versa) at any time

Jog-dial

- Menu navigation through jog-dial
- Intuitive user interface is fast, safe and effective
- Integrated visual alarm

Function keys

- Direct access to the most important functions through special defined keys
- Fast immediate operation, no need for complex menu navigation

The Monitoring unit may be connected to the Defibrillator/Pacer unit even without Patient box in order to provide a compact unit. The monitor screen is tiltable at a 30° angle for total flexibility and visibility. Never lose sight of the patient's vital signs.

patient box

Uninterruptible monitoring from the EMS site into the hospital.

The Patient box is the ”heart” of the system (weighing just 1.0 - 1.3 kg, depending on configuration). It contains all measuring parameters as well as interfaces and storage. Vital signs are monitored and stored here plus it can be easily placed directly with the patient and remain there throughout the entire operation.

The problem in the past of connecting and disconnecting of cables and sensors is now history. With the Patient box they are already preconnected inside the protective bag and can be used immediately. This ensures that in critical moments like moving the patient from the EMS stretcher to the clinic bed uninterrupted monitoring is maintained.

With a backlit monochrome display the Patient box can be used independently of the Monitoring unit (incl. voice recording and acoustic alarms). All measured data are recorded and data stored for later transfer.

Data transfer via:
- **WLAN**
- **USB**
- **CompactFlash®**

corpuls
the next generation

GPS-clock
- Synchronisation of time and date through GPS

USB-interface
- Transfer of default settings of devices via USB-stick
- Transfer of recorded data via USB-stick

CompactFlash® drive
- Data storage on CompactFlash® drive
- Transfer of recorded data via CompactFlash® drive

12 lead Diagnostic-ECG
- Simultaneous 12 lead Diagnostic-ECG
- Upgrade to include measuring and interpretation software for PCI or LYSE treatment

SpO_2
- Measurement of blood oxygen saturation with Masimo SET® technology
- Unrivalled accuracy and measurement even with low perfusion

CO_2
- New main stream technology capONE from Nihon Kohden (based on a GS patent)
- Use with both intubated and non-intubated patients

NIBP
- Fast reliable and accurate automatic non invasive blood pressure measurement
- Suitable for adults, children and neonates

2-channel temperature
- Measurement of both core and skin temperature

4-channel IBP
- Sophisticated intensive care invasive pressure monitoring (up to 4 channels)
- Measurement of arterial, venous and brain pressure

The Patient box accessory bag also protects casing, cables and sensors from damage. Only remove the cables you need. Keep the rest inside the bag which protects them from tangle, dirt and damage.

defibrillator/pacer unit

Only take the defibrillator when it is really needed!

The modular design of the **corpuls^3** enables you to totally disconnect the Defibrillator/Pacer unit when it is not needed – e. g. while transferring the patient into the hospital – you can leave the defibrillator in the emergency vehicle. The weight reduction not only offers you greater mobility and flexibility, but you also have all the advantages the **corpuls^3** provides in ergonomics and functionality.

Also on the EMS site you can take advantage of the system modularity as you are able to totally disconnect the Defibrillator/Pacer unit when it is not needed, hence your work flow is considerably simplified.

corpuls
the next generation

Shock delivery can also be activated wirelessly from the Monitoring unit if adhesive **corPatch** defibrillation/pacing electrodes are being used. This also increases the safety of the rescue team as they can stand away from the patient.

Box for adhesive corPatch defibrillation/pacing electrodes

The adhesive **corPatch** defibrillation/pacing electrodes are stored in an easily accessible box. As the box is sticking out of the Defibrillator/Pacer unit, it is easy to check if the electrodes are with the device and also to see their expiry date.

Defibrillation/pacing main cable

The defibrillation/pacing main cable can be used with either shockpaddles or adhesive **corPatch** defibrillation/pacing electrodes. The shaped cable is easily wrapped and stored around a socket that also contains an interface for cable testing which ensures increased reliability. The shape of the cable minimises reset force, which guarantees you an ergonomic and functional working at any time.

Shoulder belt and bag

During rescue operations all hands are needed. The Defibrillator/Pacer unit or the whole system is easily carried on a shoulder strap which can also be stored in the bag when not needed. This strap frees your hands to carry other devices and EMS equipment.

Defibrillator stand: Protection and compartment for electrode gel

The defibrillator stand ensures that the device can be securely positioned even on bumpy ground.

In addition the stands side compartments can be used for conveniently storing accessories like electrode gel or razor.

solutions for every scenario

Mounting

The mounting and storage of a defibrillator/patient monitoring system is essential as part of the solution to meet the range of demands users experience in EMS. GS evaluated the solutions required for mounting and charging from the very first stages of the conceptual design of this new generation of devices.

The new **corpuls³** modular system is equipped with totally new and innovative solutions to mount not only the defibrillator but also all the components of the system with or without power supply.

Mounting for the compact unit

- One hand release with strap
- Self locking safety mechanism 10 seconds after release
- Low weight, slim profile installation depth
- 12 V DC power supply or 100 - 250 V AC
- Adaptable to mount **corpuls 08/16** systems

Mounting for the Monitoring unit

- One hand release
- 12 V DC power supply or 100- 250 V AC
- Low weight, slim profile installation depth
- Also suitable for Monitoring unit with Patient box

Mounting for the Patient box

- The Patient box mounting means no more vehicle roof installation and/or extensions are required – cost saving
- 12 V DC power supply
- Easy mounting and release

Compact unit

The **corpuls³** can be used like traditional defibrillator/monitoring units.

Using the **corpuls³** as a compact unit at the EMS site you can experience the benefits and advantages the modular architecture of the system can bring to the scene.

Modular use

The **corpuls³** can be separated into a Monitoring unit, a Patient box and a Defibrillator/Pacer unit. The Patient box can remain with the patient throughout the entire operation and keeps you updated with all vital signs while you are holding the Monitoring unit. If you need the defibrillator or pacer – just use it! You decide, you choose the combination and use of the system to meet your needs.

Semi modular use

The concept of the **corpuls³** allows both compact and fully modular use. It is also possible to operate the unit in a semi modular format. Two combinations are possible:

1. Remove the Patient box and place it with the patient. Leave Monitoring unit together with the Defibrillator/Pacer unit and operate it similar to a compact device (see picture on the right).
2. Detach Monitoring unit and Patient box together from the Defibrillator/Pacer unit in order to get closer to the patient.

Compact monitor

The Monitoring unit and Patient box together provide a fully functional transport monitor. This combination can work independently of the Defibrillator/Pacer unit and with its low weight, large screen, and wide printer and accessories provides a solution which out performs many traditional transport monitoring systems.
So there is no need for an extra monitor in the emergency vehicle. Just buy one device and get two solutions.

Modular monitor

Separating the Patient box from the Monitoring unit is a unique feature no other device can offer. Functionally and ergonomically this system enables you to improve your results. All vital data is being transmitted in real-time to the Monitoring unit. So you never lose control over the patient.

First monitoring

It is also possible to use the Patient box on its own for basic monitoring. Vital signs can be displayed on a backlit monochrome display. In addition there is an acoustic alarm, pulse tone and a built in microphone. A CompactFlash® card provides internal memory for the device.

medical technology, setting the benchmark

www.corpuls.com

life energy

GS Elektromedizinische Geräte G. Stemple GmbH is a German company which has developed and manufactured medical devices for more than 25 years.
Our **corpuls®** defibrillator and patient monitoring systems are robust, reliable and durable devices designed for the professional. **corpuls®** products are used in the first aid treatment of people suffering from sudden cardiac arrest which occurs in a variety of situations across our daily lives.
Performance in a tough environment and many satisfied customers are the best proof of success. To achieve this we continually evaluate the latest scientific findings in clinical and prehospital settings and peer reviewed medical publications to help us in the design and production of state-of-the-art products. This is combined with input from EMS professionals and our knowledge of the best in ergonomics and economics to produce high quality devices.
Always being ahead of the main-stream in product design and listening to our customers needs has made us successful. This has helped us to prosper in a very competitive market. We are continuing to preserve this heritage in the future, and look forward to developing better life saving and support techniques and solutions for people dedicated to saving lives.

MEDICAL TECHNOLOGY
MADE IN GERMANY

Layout M&W, www.m-und-w.de

Art.-Nr. 76133.100, 04, EN

25 years corpuls®

GS Elektromedizinische Geräte GmbH · Hauswiesenstraße 26 · 86916 Kaufering/Germany
Phone: +49 8191 65722-0 · Fax: +49 8191 65722-22 · info@corpuls.com · www.corpuls.com/uk

specifications

Monitoring unit

- 8.4“ colour display, transflective, backlit; up to 6 traces simultaneously; 12 lead preview for Diagnostic ECG
- 30° tiltable, peripherally push protected
- Visible alarm, speaker
- Intuitive user interface
- Printer: paper width 106 mm, paper length 22 m; up to 6 traces simultaneously printing; Printing speed: 6.25, 12.5, 25, 50 mm/s; low maintenance design
- USB interface; GSM modem (optional)
- Weight: 2.7 kg
- Size (HxWxD): 29.5 cm x 30.5 cm x 12 cm

Patient box

- 12 lead ECG, SpO_2, NIBP, CO_2, 4xIBP, 2xTEMP
- CompactFlash® drive; microphone for voice recording; acoustic alarm
- Backlit monochrome display (20 mm x 40 mm)
- USB interface, WLAN
- Protection and accessory bag for cables and sensors
- Weight: 1.0 - 1.3 kg (depending on configuration)
- Size (HxWxD): 13.5 cm x 26.5 cm x 5.5 cm

Defibrillator/Pacer unit

- Biphasic, rectangular waveform, full impedance compensation
- AED protocol according to AHA/ERC 2005 Resuscitation Guidelines
- 2 to 200 Joules, configurable energy protocol, 1-2-3- work-flow
- Patented safety shockpaddles
- Transcutaneous pacer with FIX-, DEMAND- and OVERDRIVE-Mode for Ramp-Down Pacing (max. 300/min); Stimulation via **corPatch** defibrillation/pacing electrodes; intensity 0 – 150 mA, frequency 30 – 150/min
- Weight: 3.7 kg
- Size (HxWxD): 29 cm x 30 cm x 19 cm

General specifications

- Operating temperature:
  - Monitoring, ECG, Defibrillator, Pacer, Display: -20 °C to +55 °C
  - SpO_2, NIBP, IBP, Temp: 0 °C to +55 °C
  - CO_2: 0 °C to +45 °C
- Splash-proof (IPX4)
- Hit protected, DIN EN 1789
- Li-Ion Battery (3 batteries, identical in construction)
- Power supply with 12 V DC, 100 – 250 V AC with mains adapter (compact device or each single module)
- Weight: 7.4 kg (basic configuration)
- Size (HxWxD): 36 cm x 30.5 cm x 23 cm (compact device)

energy management

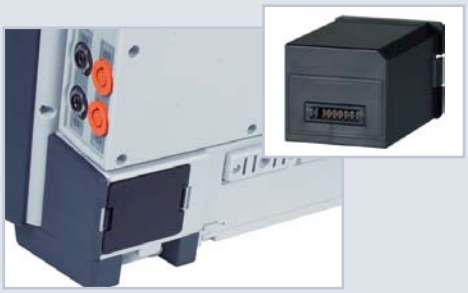
One for all - all for one

When being used as a compact device each component can revert to the battery capacity of the other components. The exchange and use of energy of the other devices is made by special contacts between the components.
This means that you can use the energy of three batteries at anytime.

Contacts between Monitoring unit and Patient box

Three components – three batteries – three times energy management!

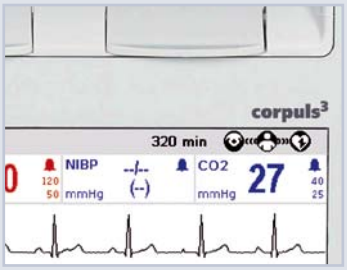
Each device has identical batteries. They can be easily replaced by hand without tools as needed.



Exchange of the battery can be done by hand

Flexibility counts - the **corpuls³** takes over!

Do you have enough energy left to safely complete your operation? The **corpuls³** gives an exact forecast of the capacity left in each battery minute by minute. It evaluates the actual energy usage to determine an exact forecast of the running time remaining for the system.



Screenshot of remaining running time while fully connected

User-friendly charging through magnetic contact

Charging the device or one of the components is easy and fast. Each component has a magnetic contact, which can be attached to a special magnetic plug for charging. Attached to each other the batteries can be charged or alternatively the unit can be operated on mains only – even without any batteries inserted into the device.

If you are in a hurry? Disconnecting the device from a mains plug is no longer required. Just take the unit and move away. The magnetic plug automatically disconnects without damaging the device.

The modules can be charged either by 12 V DC directly or with a mains adapter from 100 V to 250 V AC.