

Therapy with the highest flexibility

Cardiac Rehabilitation



Cardiac rehabilitation
from the ECG expert:

***Intuitive.
Flexible.
Independant.***



Modern rehab is not just a matter of time and safety. There are many other factors which make an existing rehab system operate efficiently.

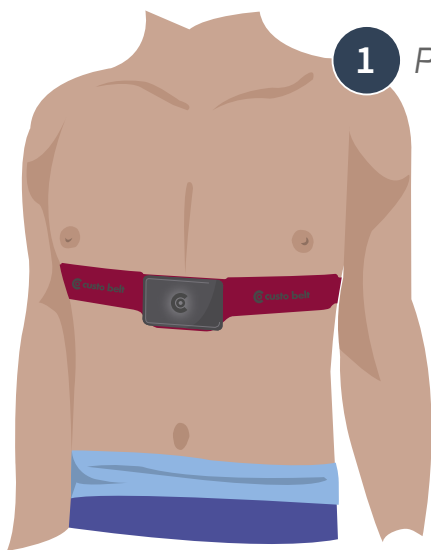
The rehab solution from custo med uses your existing devices, and what's more, it allows enhancing the mobile flexibility of applications.

The most important aspect however is: you create a perfect workflow with custo med.



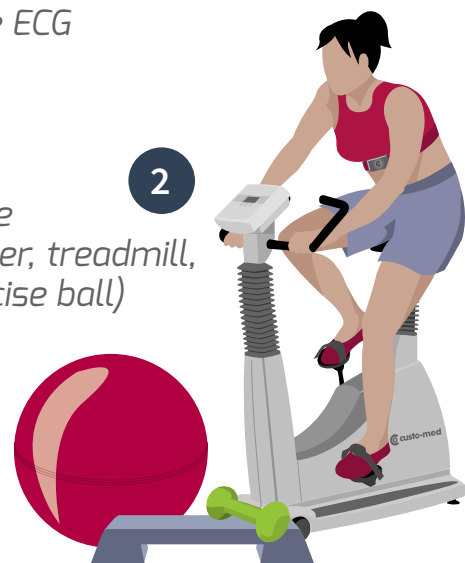
Cardiac rehab totally easy!

To perform an effective rehab, you need a perfect ECG, various training devices and good software. With these three “ingredientts” and the patient, a complete cardiac rehab is possible.



1 Patient with real-time ECG

Training device
(e. g. ergometer, treadmill,
stepper, exercise ball)

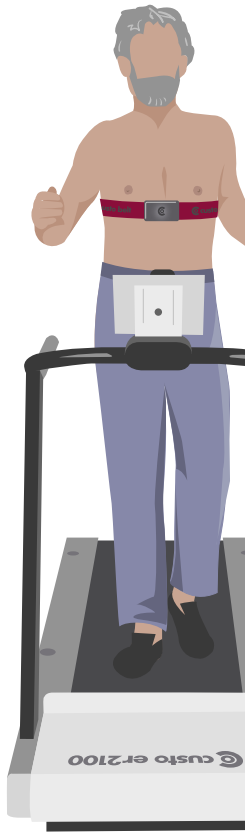
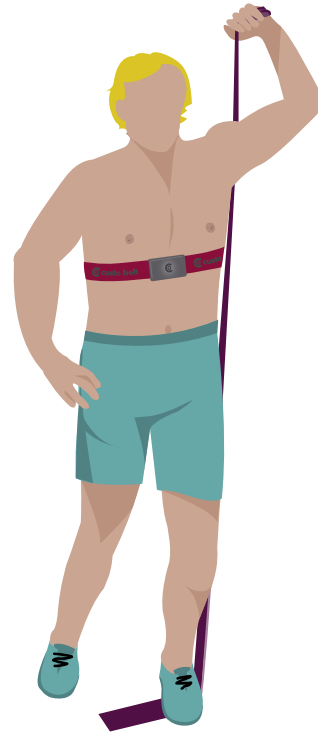
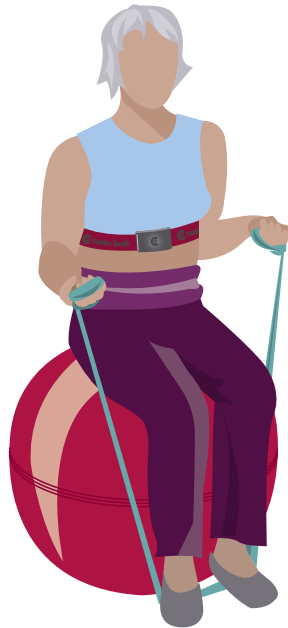
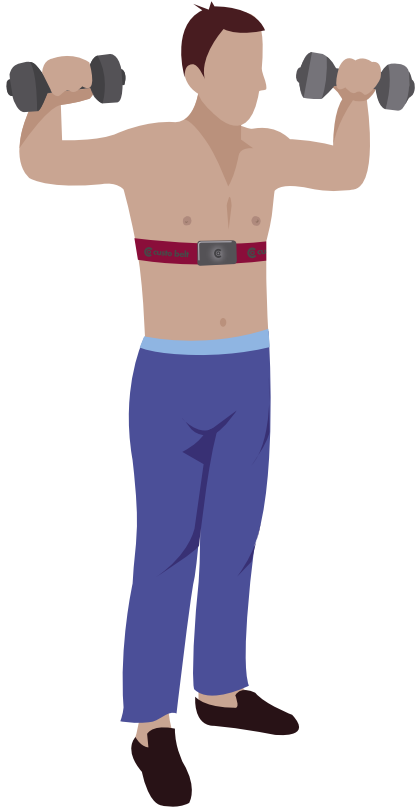


2



3

PC system with *custo rehab*,
the medical rehab software of
custo diagnostic



**Individual.
Flexible.
Intuitive.**

Our advantages:

- *Wireless and adhesive electrode-free ECG module with top signal quality*
- *Washable textile ECG belt with certificate of biocompatibility*
- *Use of already existing training devices for individual training programmes*
- *Up to 16 patients can be monitored simultaneously*



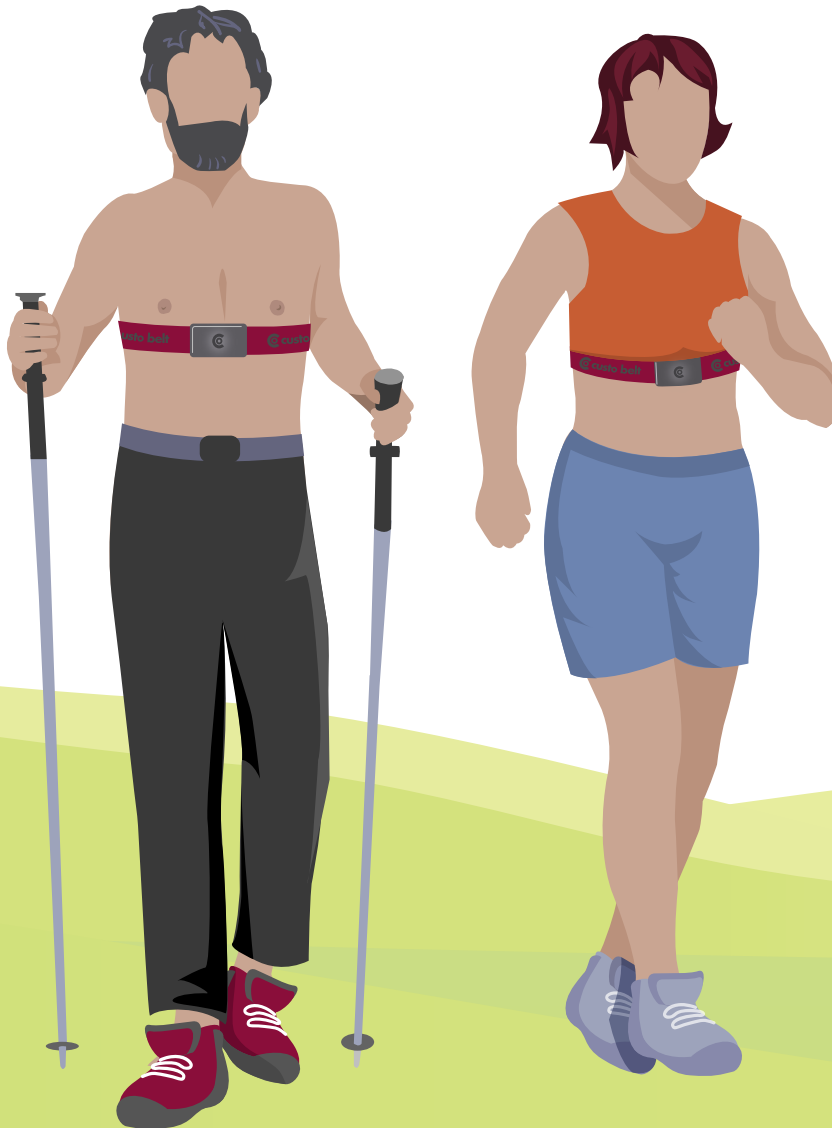


New possibilities in cardiac rehabilitation: ECG in real-time – anytime and anywhere!

Cardiac rehab from custo med provides the therapist with completely new opportunities in choosing the therapy method.

The patient receives just a small, light-weight ECG module which is clamped to a textile washable ECG belt, without cables. The patient wears the ECG module on the body during the whole rehab training. Consequently, the ECG recording is not bound to any endurance training equipment and the therapist has free choice of training devices.

All data can be monitored by means of real-time ECG via a central monitor, from which up to 16 patients can be observed simultaneously. The system is also available as outdoor version with a mobile solution.



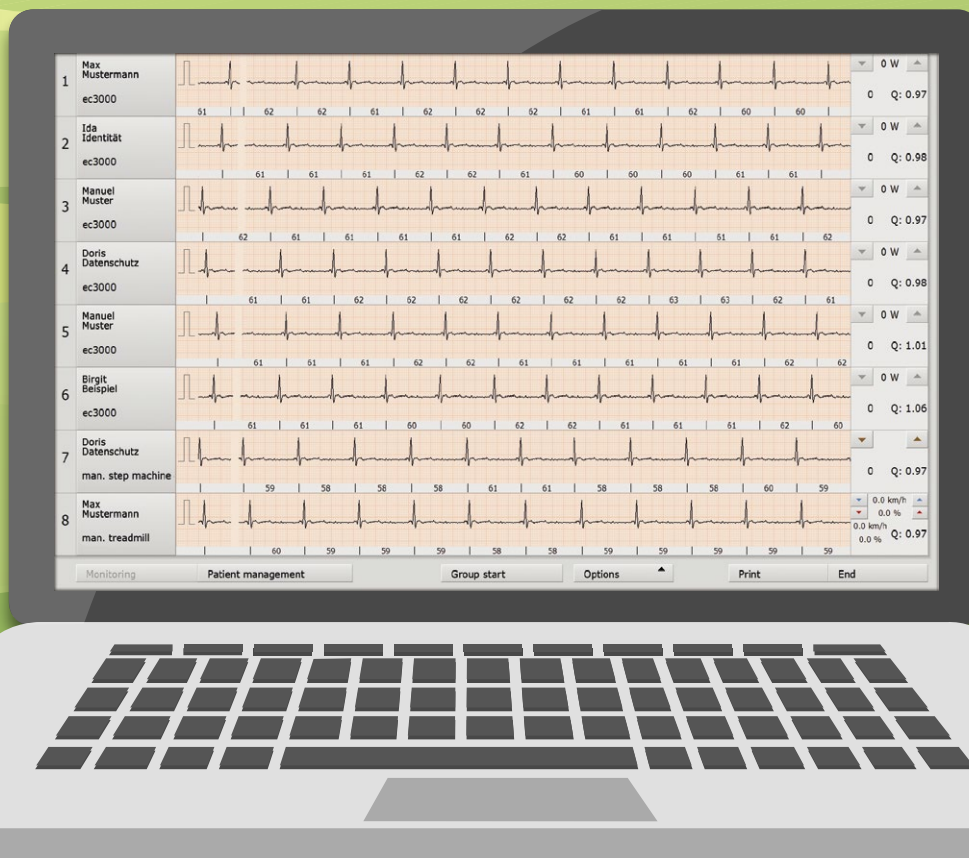
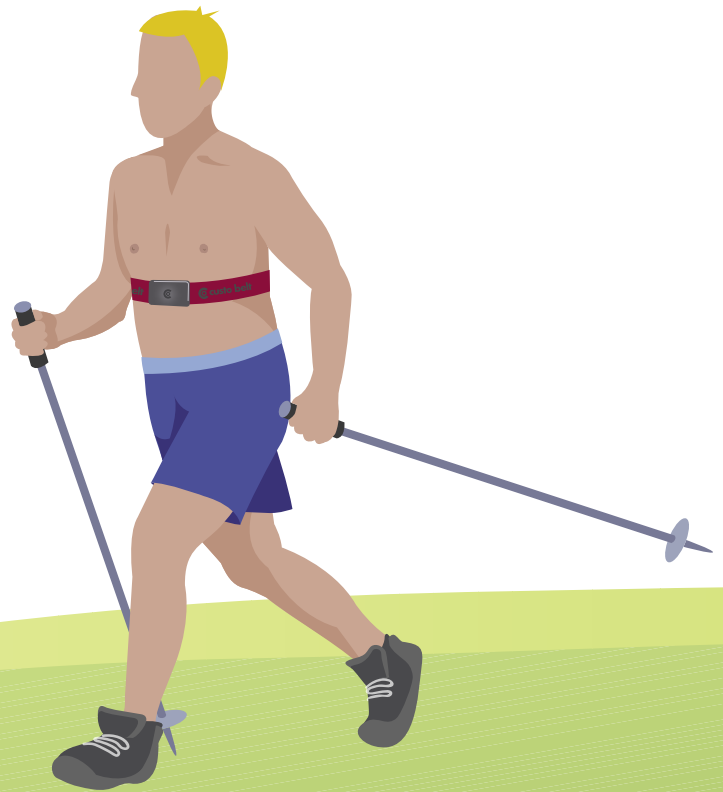
***Increased flexibility in rehab:
Outdoor training with
custo rehab***

Use the full version of custo rehab for mobile supervision of outdoor training on any Windows tablet or notebook.

All the equipment is supplied with custo long range guard so that the patients can always be monitored in real-time, even when training outdoors.

Our advantages:

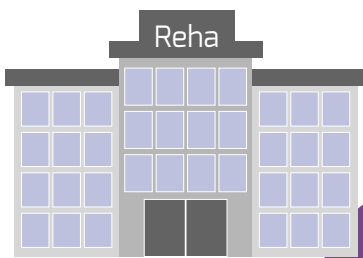
- Cardiac monitoring of outdoor training, simultaneously and in real-time
- Observing a complete training ground with notebook or tablet, safely and easily
- Coverage up to 300 metres
- Fast and automatic starting of a whole training group
- Comfortable and automatic importing of outdoor training data to the custo rehab software
- Long-range coverage due to special radio transmission



For more efficiency and safety – The digital rehab workflow in only 4 steps:

1

**Patient check-in
in rehab clinic**



Automatic transfer
of patient data

HIS
patient
admission

custo
diagnostic

2

Incoming stress test

Stress ECG with
custo cardio 300/400



Registration and automatic calculation of training zones

3

**Cardiac
Rehabilitation**



Individual selection of training
with automatic start,
also possible with smart card

4

Outgoing stress test

Stress ECG with
custo cardio 300/400



Automatic evaluation
of therapy result

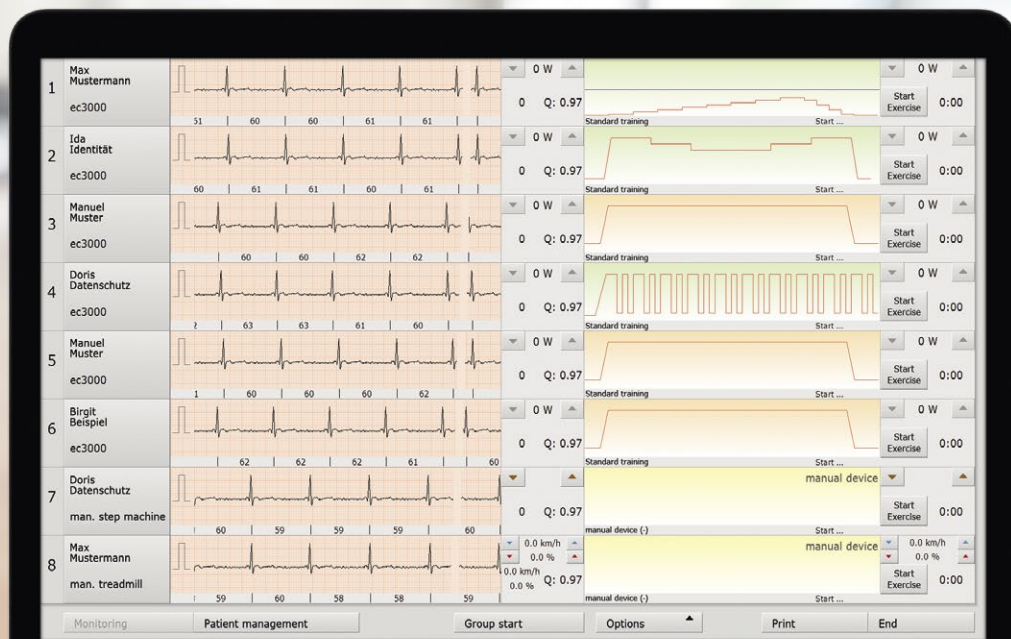
A photograph of a physical therapist, an older man with a beard wearing a white polo shirt and dark shorts, kneeling on a light-colored mat. He is assisting an elderly patient, a woman with dark hair wearing a grey t-shirt and grey pants, who is lying on her back on the mat. The therapist is holding the patient's right leg, which is raised straight up. The patient is wearing white sneakers. In the background, there is a gym setting with large windows, a wooden ceiling with exposed ductwork, and a rack of colorful exercise balls (purple, orange, grey, blue) on the floor.

Our advantages:

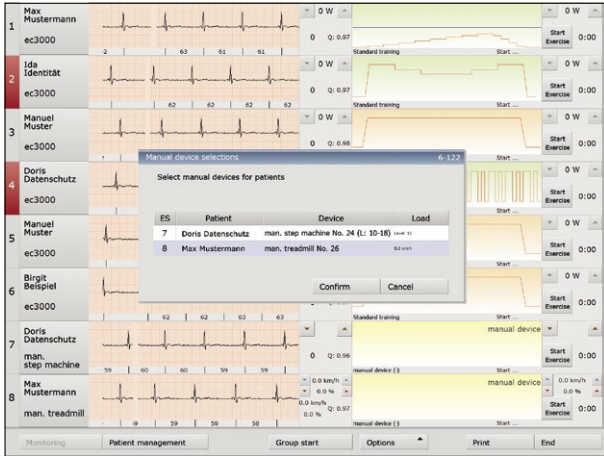
- **Fast:** seamless workflows via HL7, DICOM and GDT
- **Safe:** clear, paperless flows for all examinations
- **Modern:** flexible, manufacturer-independent device concept
- **Mobile:** fully synchronised rehab workflows, optionally in WiFi infrastructure
- **Scalable:** modular concept with transparent licence model
- **Safe investment:** manufacturer-independent rehab management and integration of legacy system
- **Future-proof:** subsequent HIS integration is possible at any time

custo rehab – the cardiac rehab software of custo diagnostic

In order to guarantee a highly efficient workflow, while saving time for the therapist and increasing patient safety, custo rehab provides a number of useful software features.



Software Highlights:



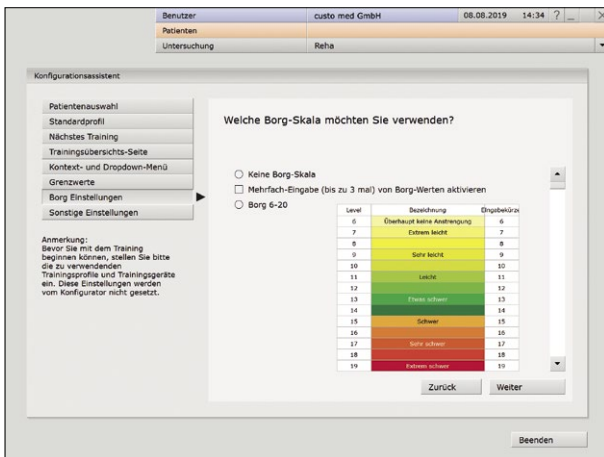
Manual devices

Integration of manual devices (also with protocols, e. g. older ergometers) or training devices without interface (e. g. exercise ball, stepper).



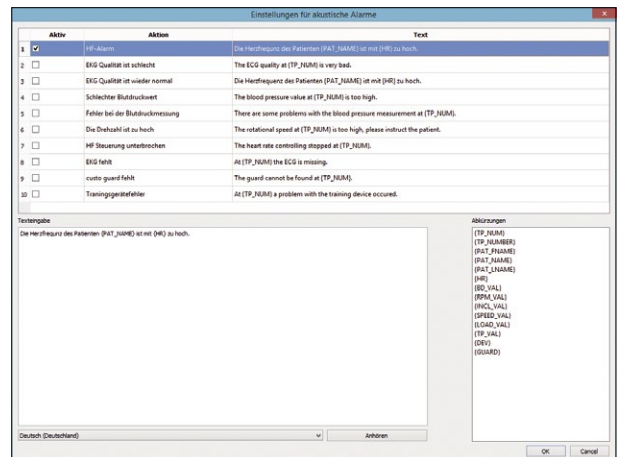
Wallboard

Freely configurable wallboard for clearly structured view of all active patients. Numeric data can be optimised and displayed in the view as desired.



Rehab assistant

The Rehab assistant is an easy first step in the rehab module. It allows all important areas from patient selection to printout to be configured quickly and easily.

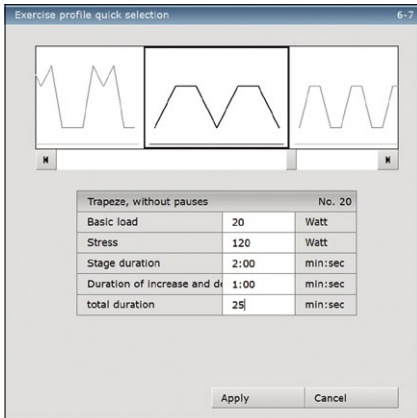


Acoustic alerts

In addition to the optical alarms, acoustic alerts can be set to quickly highlight problems or emergencies. A short description of the alert including selectable text modules such as the exercise station number is read aloud, provided that the appropriate pre-setting has been made.

Cardiac training units with custo rehab

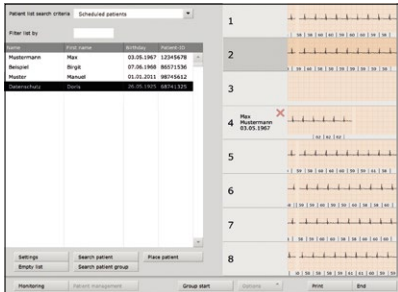
A big benefit of cardiac rehab with custo rehab is the variety of predefined training units. In addition, if particular requirements are specified, it is possible to define new training units quickly and easily with the new configuration assistant.



Training selection with custo rehab

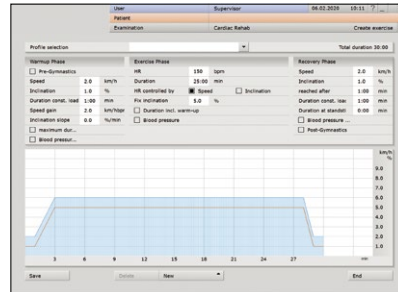
- Load-controlled ergometer training
- Speed-f and incline-controlled treadmill training
- Heart rate-controlled ergometer and treadmill training
- Heart rate-controlled interval training for ergometer and treadmill
- Adjustable load reduction when reaching the training heart rate for ergometer and treadmill
- SpO₂-controlled ergometer and treadmill training
- Predefined standard trainings for ergometer and treadmill
- Predefined interval trainings for ergometer and treadmill

Training Highlights:



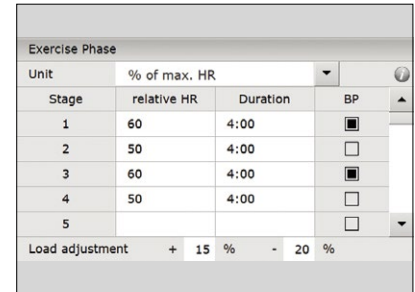
New patient selection

Faster patient search according to various criteria from the therapist's daily routine.



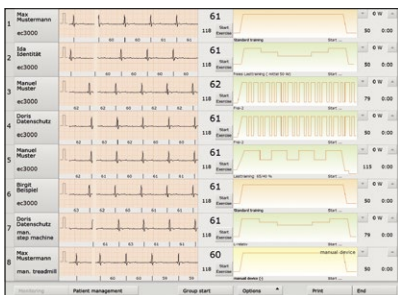
HR-controlled treadmill training

Different training options on the treadmill with fix heart rate.



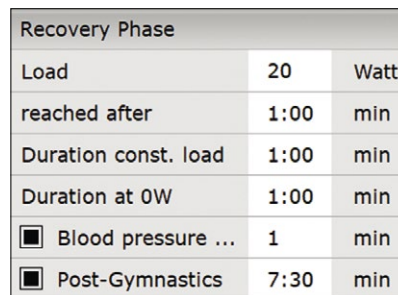
Relative HR programme

Percentage figures for the relative HR for direct adaptation to each patient.



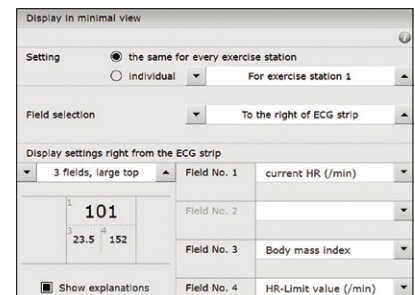
Group control

Start up to 16 patients simultaneously with one key and observe them in real-time.



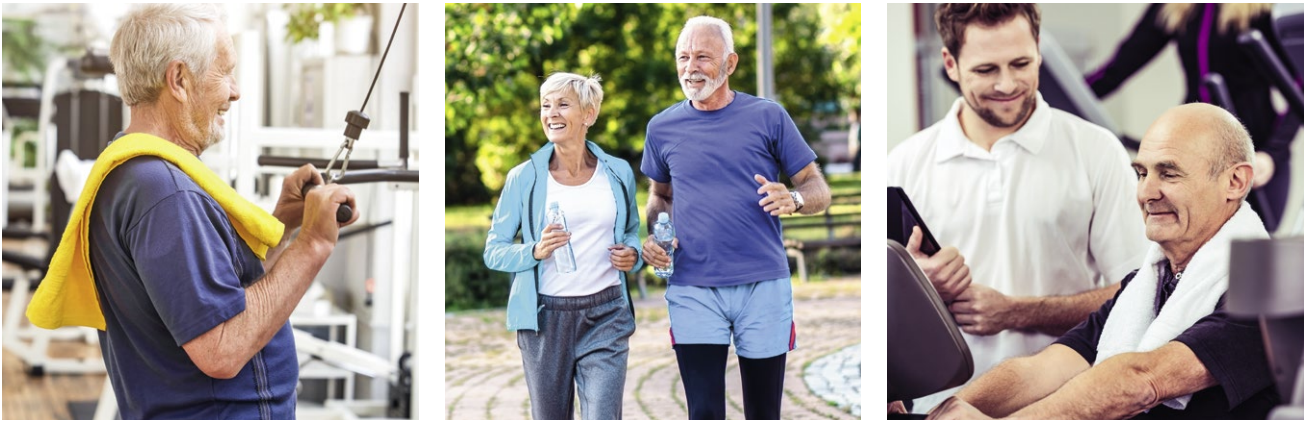
Gym phases

Pre- or post-gym phases are also recorded and assessed from a cardiac point of view.



Training user interface

Individually configurable specifications for the training user interface.

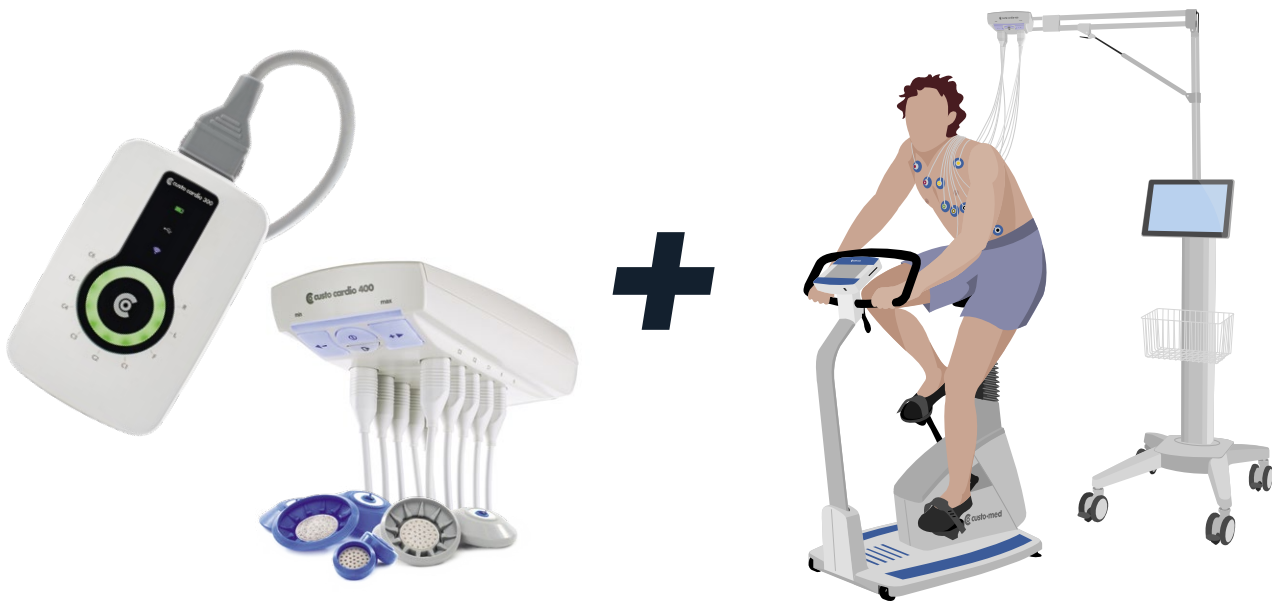


Classic Training Options:

Prologue: The recording starts as soon as the patient is known, prior to the start of training	✓
Epilogue: The recording ends after an adjustable fixed period after the end of the training programme	✓
1- or 3-channel real-time ECG analysis: QRS, ventricular extra systole, asystole, arrhythmia, etc.	✓
ECG quality monitoring	✓
Cardiac list of all training units: per day, per week, per patient	✓
Group control: start, cool down, stop, next step	✓
Patient control: start, cool down, stop, next step	✓
Asynchronous training: patients can be added or the training can be ended at any time	✓
Modification of the current training programme, for example, a programme can be extended in the current training	✓
Change of programme in the current training, a "skip to the next training programme" is possible at any time	✓
Automatic reinstallation of the patient's seat position on the ergometer	✓
Selection of patient in any combination - manually, per smart card, per group	✓
Acoustic alert per patient. For each patient, any individual WAV file can be configured	✓
Configurable pre-settings for patient alerts	✓
Configuration of predefined limits for alerts	✓
Fully automatic start of training	✓
Configurable automatic printout after the end of training.	✓
Configurable context menus and drop-down menus	✓
Direct call-up of training page from the desktop	✓
Support of external blood pressure measurement devices	✓
Automatic transfer of data from the last stress test	✓
Six-minute walk test	✓
Individually configurable training calculator	✓

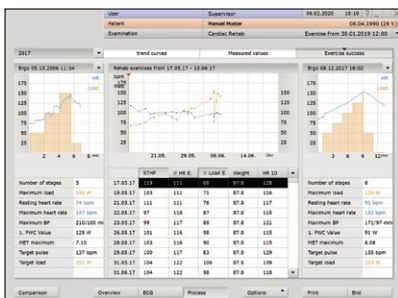
Upgrade: Success of training at a glance! Use your rehab equipment for cardiac stress tests, too.

By purchasing a 12-channel ECG device (custo cardio 300 or custo cardio 400) incl. stress test software, you can turn your rehab equipment into a fully-fledged stress ECG system. Both devices are suited for treadmill stress tests as well!

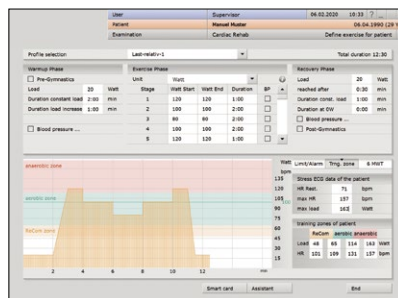


Profit from enhanced flexibility in cardiac stress testing. If required, use the endurance training equipment of your rehab system for a stress ECG.

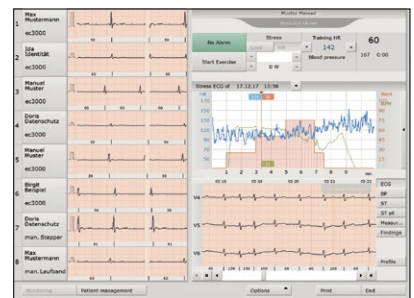
Highlights in Stress ECG



Success of training (Comparison)
Incoming and outgoing stress test compared to the rehab progress.



Training zones
3-training-zone model based on the stress test data for cardiac rehabilitation.



Stress ECG
View of stress ECG during the current rehab training.

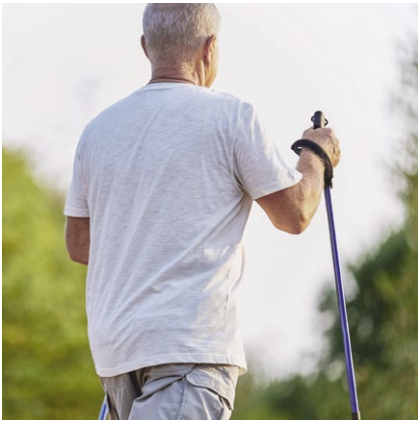
Stress ECG by custo med:

***Innovative.
Modular.
Effective.***





“Good software and devices are perfect resources, nevertheless the success depends on the therapist!”



Cardiac rehab by custo med - Experience from daily clinical routine:

In cardiac rehabilitation, the ECG-monitored endurance training on the ergometer plays a central role in kinetic sports therapy.

As a sports therapist, I am glad to have a well-functioning ergometer equipment in my clinical routine. After having performed ECG monitoring with adhesive electrodes and later with suction equipment for many years, the great breakthrough has come with the new custo guard system: The patient can prepare more quickly and easily for the training and the belts with the adhesive transmitter can be kept clean with much less expenditure. The system is considerably more hygienic, less prone to interference and faults and causes significantly lower current costs in daily clinical routine.

As to the software, I particularly like that the user interface for the performance of training can be individually adjusted according to our needs.

Via a training calculator, the training requirements can be determined from the stress ECG and these wattage and heart rate limits can then be directly transferred to the training user interface.

In addition, we meanwhile use the paperless training documentation. The software does our work as it determines and takes over many values automatically. Consequently we, as therapists, have much more time for the individual care and communication with our patients

Heinz Lewis
Director of sports and physical therapy
Drei-Burgen-Klinik
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Germany

View Options:

- 3 freely configurable fields for displaying various values per exercise station ✓

- ECG writing speed adjustable for each exercise station ✓

- ECG amplitude adjustable for each exercise station (also per mouse wheel) ✓

- ECG channel selection via dialogue box (I, II, III or all) ✓

- ECG and grid colour selectable, 4 different colour schemes can be selected ✓

- ECG with/without RR view, RR distance as ms or HR ✓

- ECG quality view ✓

- Enlarged view per patient ✓

- Complete ECG can be scrolled backwards/forwards ✓

- Short printout of ECG (one click), printout of a 20 second ECG strip ✓

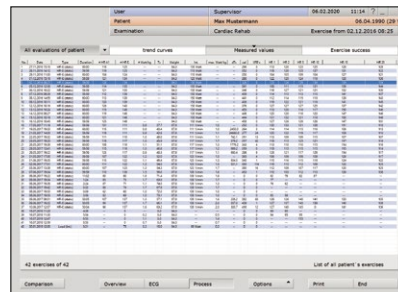
- Modification of training in the current training, diverse modification options depending on training method ✓

- Modification of single or all training phases, numerically or per mouse wheel ✓

- Group extension: patients can be added to a group at any time, even if they are not part of the group ✓

- View of completed training units of a patient in the current training incl. ECG and the complete progress of all training units ✓

- Training table for data of all patients / Training table for all evaluations of a patient ✓



Examples for different view options

Software Facts:

Recorded signals and values

ECG, 1-channel	✓
ECG, 3-channel	✓
ECG, 12-channel	✓
Load, speed, incline, rotational speed	✓
SPO2	✓
Blood pressure	✓
Lactate	✓
Actual and target load	✓
Markings	✓
Events (manual and automatic)	✓
Alerts	✓
User actions	✓
Comment	✓
ECG analysis results	✓

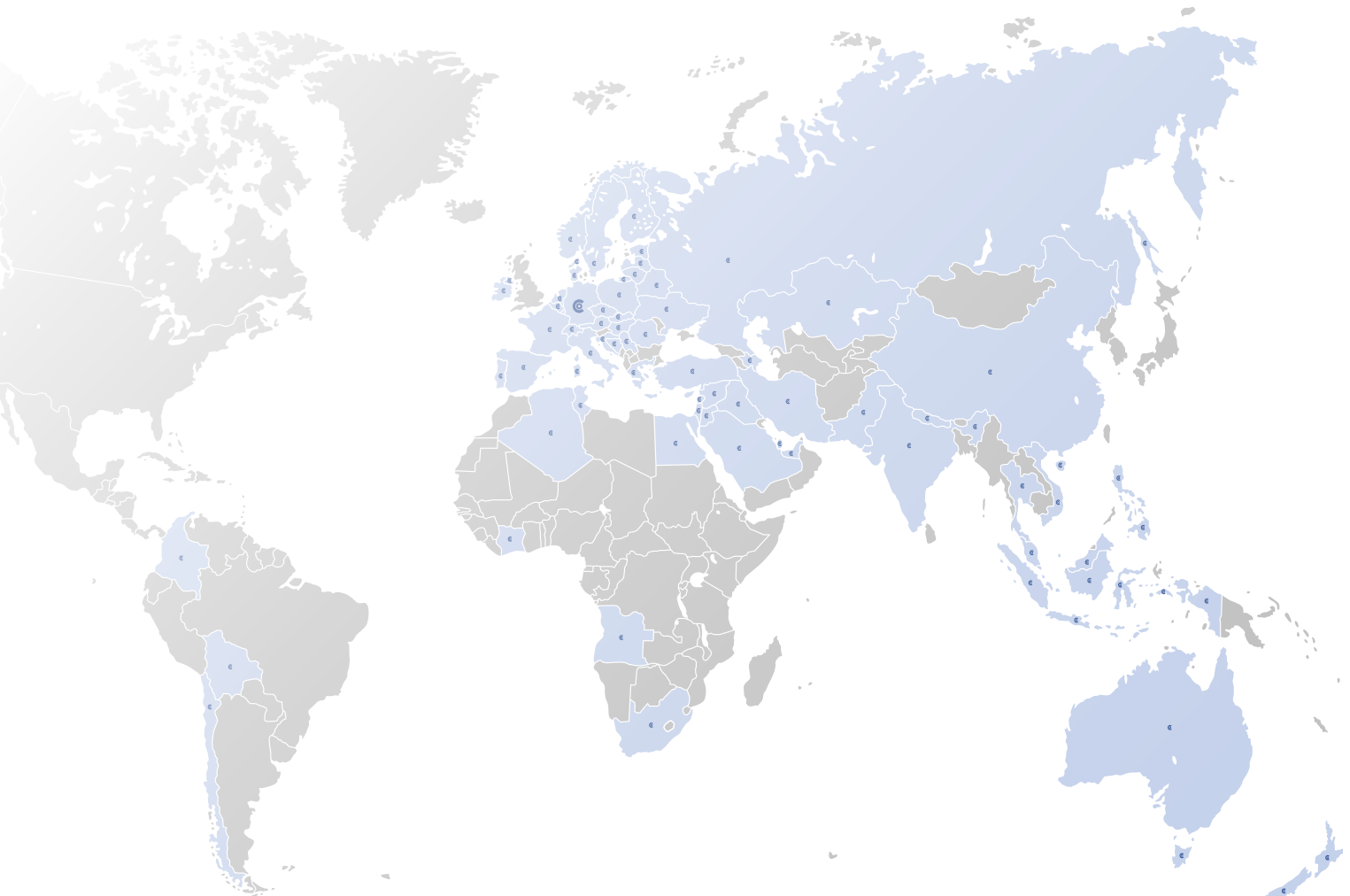
Performance features of the system

Central database	✓
Network-compatible, simultaneous access to the data of several workstations is possible	✓
Connection to HIS and EHR system	✓
HL7	✓
DICOM	✓
BDT/GDT	✓

Cardiac rehab live at your location:

We would be pleased to come to your location for a personal presentation and in order to elaborate with you a tailor-made custo med rehab solution.

Please contact our rehab team at
info@customed.de · Phone: +49 (0) 89 710 98-00



Services:

- Comprehensive sales and service network due to certified custo med dealers
- Training and process consultation
- Safety-related and metrological inspections
- Repair and service
- Provision of rental equipment to bridge repair times
- Inspection and maintenance
- Upgrade service
- Maintenance agreements

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