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.

Certified according MDD 150-13485

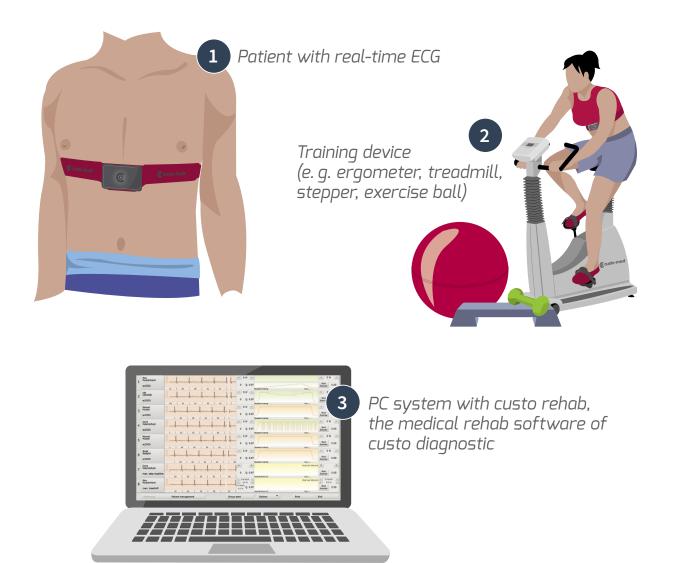
The rehab solution from custo med uses your existing devices, and what's more, it allows enhancing the mobile flexibility of applications.

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 "ingrediennts" and the patient, a complete cardiac rehab is possible.



Our advantages:

 Wireless and adhesive electrodefree ECG module with top signal quality .

C cristo er 2100

Individual. Flexible. Intuitive.

- 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



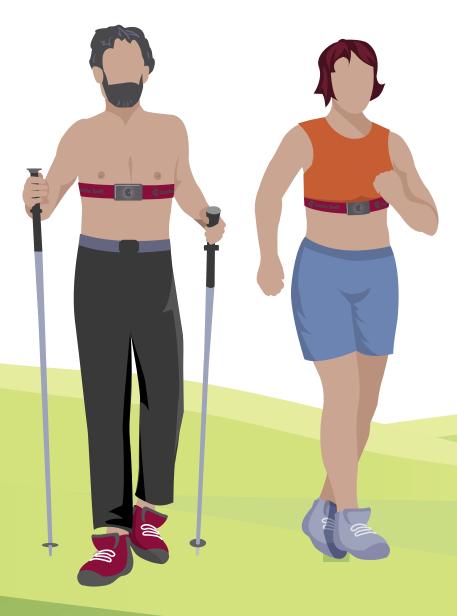
New possibilities in cardiac rehabilitation: ECG in real-time – anytime and anywhere!

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.

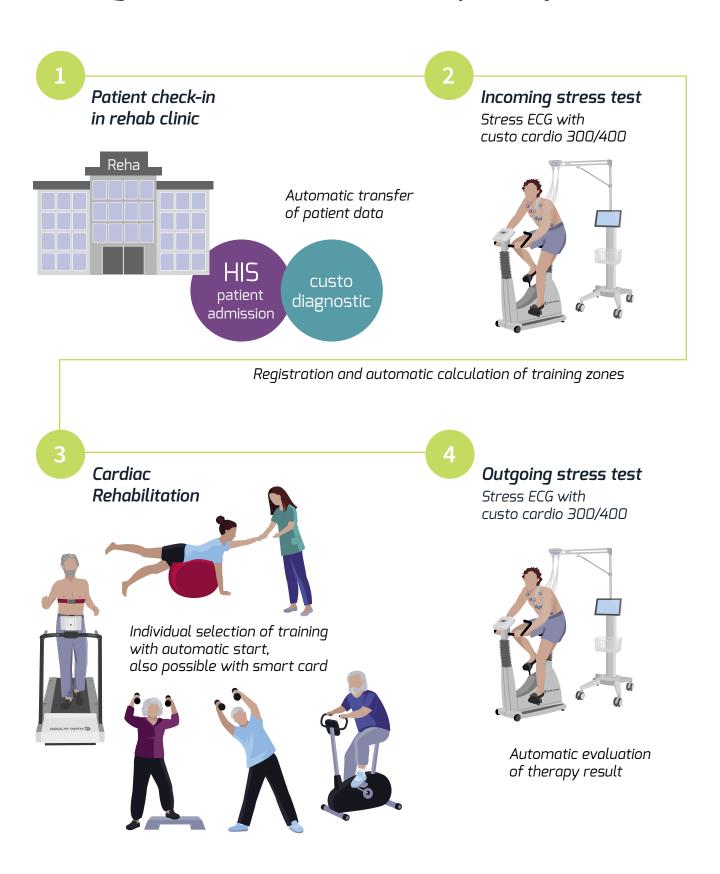
All the equipment is supplied with custo long range guard so that the patients can always be monitored in real-time, even when training outdoors.

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

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



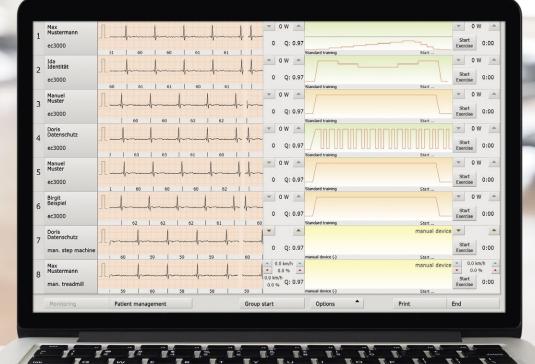


Our advantages:

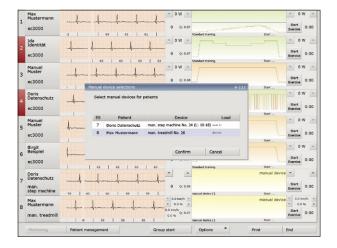
- Fast: seamless workflows via HL7, DICOM and GDT
- **Safe:** clear, paperless flows for all examinations
- **Modern:** flexible, manufacturer-independent device concept
- *Mobile:* fully synchronised rehab workflows, optionally in WiFi infrastructure
- **Scalable:** modular concept with transparent 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:



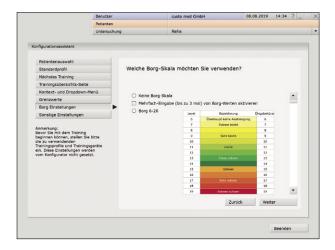
Manual devices

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

1 Max	2 Birgit	3 Doris	4 Manuel
Mustermann	Beispiel	Datenschutz	Muster
22 W 78 0:46	22 W 76 0:46	22 W 90 0:46	22 W 76 0:46
5 Manuel	6 Doris	7 Birgit	8 Max
Muster	Datenschutz	Beispiel	Mustermann
22 W 80 0:46	22 W 88 0:46	22 W 92 0:46	22 W 81 0:46
9 Max	10 Birgit	11 Doris	12 Manuel
Mustermann	Beispiel	Datenschutz	Muster
22 W 82 0:46	22 W 80 0:46	22 W 90 0:46	22 W 75 0:46
13 Manuel	14 Doris	15 Birgit	16 Max
Muster	Datenschutz	Beispiel	Mustermann
22 W 77 0:46	22 W 81 0:46	22 W 84 0:46	22 W 88 0:46

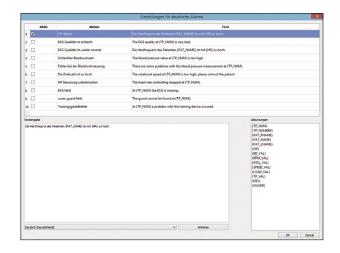
Wallboard

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.

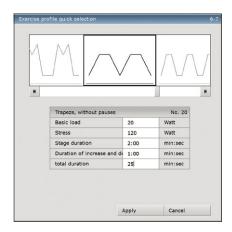


Acoustic alerts

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

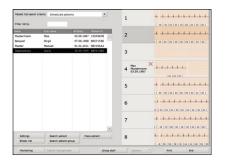
A big benefit of cardiac rehab with custo rehab is the variety of predefined training units. In addition, if particular requirements are specified, it is possible to define new training units quickly and easily with the new configuration assistant.



Training selection with custo rehab

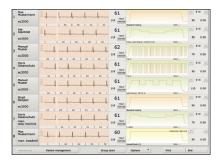
- Load-controlled ergometer training
- Speed-f and incline-controlled treadmill training
- Heart rate-controlled ergometer and treadmill training
- Heart rate-controlled interval training for ergometer and treadmill
- Adjustable load reduction when reaching the training heart rate for ergometer and treadmill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



Group control

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



HR-controlled treadmill training Different training options on the treadmill with fix heart rate.

Recovery Phase		
Load	20	Watt
reached after	1:00	min
Duration const. load	1:00	min
Duration at 0W	1:00	min
Blood pressure	1	min
Post-Gymnastics	7:30	min

Gym phases

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

Exercise Pha	se			
Unit	% of max. HR		-	0
Stage	relative HR	Duration	BP	
1	60	4:00		-
2	50	4:00		
3	60	4:00		
4	50	4:00		
5				-
Load adjustn	nent + 15	% - 20	%	-

Relative HR programme

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

						0
Setting	the same	ne fe	or every e	exerci	se station	
	O individ	ual	-		For exercise station 1	-
Field selec	tion		-	TR	o the right of ECG strip	-
Display set	ttings right from t	he E	CG strip			
▼ 3 fle	ds, large top	•	Field No	. 1	current HR (/min)	•
1	101		Field No	. 2		•
32	3.5 4 152		Field No	. 3	Body mass index	•

Training user interface

Individually configurable specifications for the training user interface.

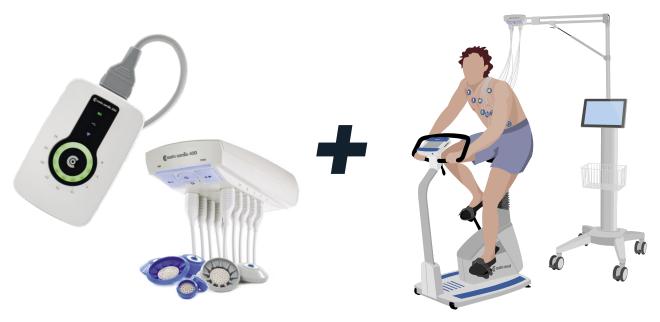


Classic Training Options:

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	v
1- or 3-channel real-time ECG analysis: QRS, ventricular extra systole, asystole, arrythymia, 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	v
Modification of the current training programme, for example, a programme can be extended in the current training	5
Change of programme in the current training, a "skip to the next training programme" is possible at any time	v
Automatic reinstallation of the patient's seat position on the ergometer	v
Selection of patient in any combination - manually, per smart card, per group	v
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.

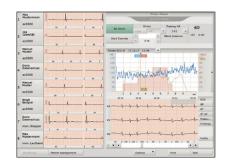
Highlights in Stress ECG

		User			Supervi	801			06.02.2020 10:1	2 -
		Patient			Manuel 8	Huster			06	04.1990 (29
		Examination			Cardiac	Rehab			Exercise from 30.01	2019 12:00
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Resting heart rate	74 tom	21.05.17	111	111	76	87.8	117		Resting heart rate	91.bpm
Maximum heart rate	147 bpm	22.05.17	97	110	87	87.8	115		Naximum heart rate	152 bpm
Haximum BP	210/100 ml	23.05.17	99	117	89	87.8	121		Hasimum BP	171/97 m
1. PWC Value	125 W	26.05.17	101	116	98	87.8	115		1. PWC Value	91 W
HET maximum	7.10	28.05.17	103	116	90	87.8	115		NET maximum	6.08
Target pulse	137 bpm	29.05.17	100	117	83	87.8	129		Target pulse	155 bpm
Target load	253 m	31.05.17	104	122	106	87.8	109		Target load	
		01.06.17	104	122	90	87.8	110			

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.

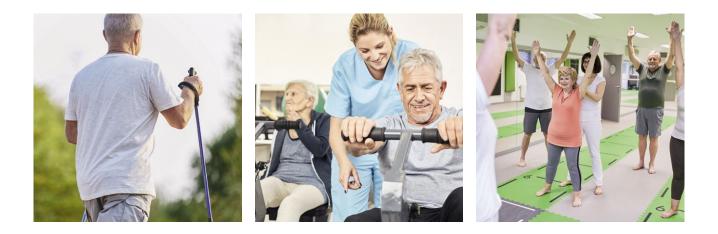


Stress ECG View of stress ECG during the current rehab training.

Stress ECG by custo med:

Innovative. Modular. Effective.





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 Lowis Director of sports and physical therapy Drei-Burgen-Klinik 55583 Bad Münster am Stein-Ebernburg Germany

View Options:

3 freely configurable fields for displaying various values per exercise station	v
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	v
ECG with/without RR view, RR distance as ms or HR	~
ECG quality view	v
Enlarged view per patient	~
Complete ECG can be scrolled backwards/forwards	v
Short printout of ECG (one click), printout of a 20 second ECG strip	v
Modification of training in the current training, diverse modification options depending on training method	V
Modification of single or all training phases, numerically or per mouse wheel	V
Group extension: patients can be added to a group at any time, even if they are not part of the group	V
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	~

		User		Supervisor	06.02.2020	11:13 ? _ ×			User			Sug
		Patient		Max Mustermann		06.04.1990 (29 %)			Patient			M
		Examin	Nation	Cardiac Rehab	Exercise from	28.05.2017 13:41 *			Examinatio	8 1		
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Recovery		mmina		1 114 1 113 1 113 1 1	0 1 10 1 10 1		42 exercises of 42					



Examples for different view options

Software Facts:

Recorded signals and values	
ECG, 1-channel	V
ECG, 3-channel	 ✓
ECG, 12-channel	
Load, speed, incline, rotational speed	 ✓
SPO2	 ✓
Blood pressure	V
Lactate	 ✓
Actual and target load	 ✓
Markings	V
Events (manual and automatic)	V
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	v
Connection to HIS and EHR system	v
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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custo med GmbH

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