Detailed specifications:

Size and weight:	295 x 225 x 82 mm, 2.5 kg
Mains voltage:	100-240 V 50/60 Hz
Mains power consumption:	0,3-0,6 A
Battery type:	10V, min. 2000 mAh NiMH battery pack
Operating time with battery:	Min. 4 hours continuous operation in monitoring mode; min. 30 minutes printing
Leads:	Standard and Cabrera 12 leads
Paper speed:	10, 25, 50, 100 mm/sec $\pm$1%
Sensitivity:	0.25, 0.5, 1, 2 cm/mV $\pm$3%
Built-in printer:	
Printer paper:	Heat-sensitive 112 mm wide, z-fold, 112x150 mm sheets
Printing:	High-resolution thermal printer head
Printing / lead selection:	3 or 6 channels from 12 leads
Optional external printer:	
A4 laser printer connection option	
Printing / lead selection:	3, 6 or 12 channels from 12 leads
Printed data:	
ECG record data:	Date, time and patient name or identifier automatically
ECG measurement results:	Intervals, amplitudes, electric axis
	Mean complexes and rhythm curve
	Recommended diagnosis
	Rhythm analysis decision categories and statistics
Monitoring on the display:	
Display:	TFT, 800x480 pixel, 153x94 mm
Display / lead selection:	3, 6, 12 or 12+1 channels from 12 leads
Digital conversion data:	
A/D converter:	13 bit simultaneous data acquisition
ECG amplifier:	12 leads according to IEC and AAMI regulations
Pacemaker tolerance:	
Max. pacemaker energy:	$\pm$700 mV/2ms
Pace detector operation:	Min. 2 mV/0.5 ms…max 700 mV/2 ms
Filters:	50/60 Hz mains interference filter, programmable muscle filters, digital baseline filter
Output / Input:	
RS 232 isolated active serial	
Isolated USB A and B	
Analog input:	+/-5V, 10mV/500Hz resolution
Storage capacity:	
Min. 100 diagnosed curve	
Controls:	
Foil keys and touch-screen	
Safety data:	
Patient leakage current:	Less than 10 μA
Safety class:	"I", "CF" according to IEC 601-1
Defibrillator protection:	Only with defibrillator protected cable
Environment requirements:	
Operating temperature:	+10…+40 C°
Storage temperature:	-20…+55 C°
Recommended accessories:	
10-lead patient cable with electrode set	
4-lead patient cable	
USB cable	
Device program selection:	
Analysis and diagnosis program	
Rhythm analysis	
Exercise program module	
PC program selection:	

Innobase for Windows database management systemPC monitoring program with 12-channel monitoring and size A4 printingSoftware options require at least Windows XP operating system. Windows XP is Microsoft Corp. trademark.

We reserve the right to modify stated data.

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HeartScreen 112 *Clinic*

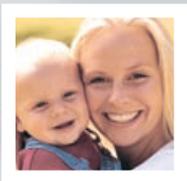## Diagnostic ECG with 12-Channel Color LCD

CE 0120

Main features:

- ▶ 12 standard or Cabrera leads' simultaneous measurement
- ▶ 112 mm wide thermal printer, 6-channel printing
- ▶ 12+1 lead monitoring on the large 7" graphic LCD
- ▶ Size A4 printing when laser printer is connected (optional)
- ▶ Full alphanumeric keyboard on the touch-screen
- ▶ Mains and mobile operating mode: high-capacity battery, built-in power supply, intelligent quick charger
- ▶ High memory capacity

Services:

- ▶ Automatic and manual lead selection
- ▶ Z-fold paper with 112x150 mm sheets
- ▶ Pace-maker signal detection and recording
- ▶ Programmable recording modes
- ▶ ECG analysis program with automatic diagnosis suggestion
- ▶ Rhythm analysis with statistics
- ▶ Pulseoxymeter channel (optional)
- ▶ HR, SpO_2 monitoring possibility, adjustable alarm limit values for HR and SpO_2 parameters
- ▶ Foil keys for main functions
- ▶ Exercise ECG option
- ▶ High-speed 12-channel on-line monitoring and Cardiological database management program on the PC

Reliable basic functions

The HeartScreen 112 Clinic is a 12-lead ECG device based on the most modern microcomputer-controlled development results.

As a result of the refined analog and digital signal processing technology the 12-channel record and the curse on display and processing are completely noise-free and precised.

High-resolution LCD

The 800x480 pixel, 153x94 mm large display makes it possible to display in detail all the waves of the ECG curve. The leads appear in different colors, so the overlapping curves are easily distinguished. The strong backlight provides high-contrast image under all light conditions. All functions are easy to access and operate using the services that appear in the menu system.

Ergonomic controls, menu-controlled functions

The new design that makes it comfortable and a pleasure to use the device, fits right into your modern environment. The functions and settings are easy to handle with the foil keys and the touchscreen, which also make operation flexible and simple.

Long-life thermal printer, excellent printing quality

As a result of thermal printing technology, the printer contains few moving parts only, and can print as much as 50.000m. The printed curves perfectly indicate all details of ECG's QRS complex and all other waves. The HeartScreen 112 Clinic contains a 112mm wide thermal printer unit that is able to print 6 or 3 channels.

A laser printer can be connected to the device, to print size A4 ECG reports directly to normal paper.

Mobile operating mode

The high-capacity battery and the modern charging technology in the HeartScreen offer absolute safety for the user requiring mobile application. The minimum 4-hour continuous operation in monitoring mode and the minimum 30-minute printing with a single charge of-

fer ample security in even the most unanticipated situations. However, the built-in charger quickly charges the battery. Even when the battery is completely drained, the device operates automatically when connected to the mains.

Infinite upgrade options

The HeartScreen family offers a wide range of options for the ECG diagnostics user to get the best possible device. The HeartScreen concept makes it possible to create a versatile, multi-functional cardiological diagnostic center from a high-level basic ECG diagnostic device. The user can do this anytime and at any pace, since the construction offers infinite possibilities for different versions.
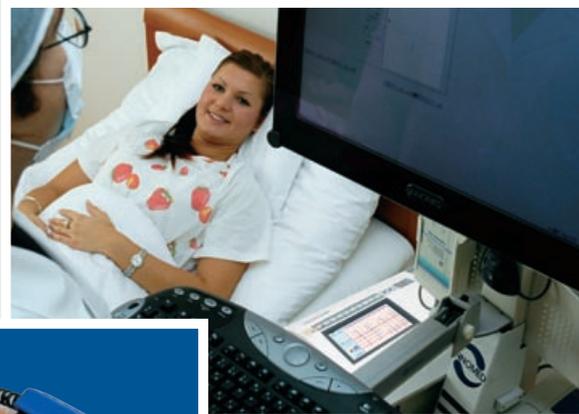

Options

The pulseoxymeter channel offers the simultaneous monitoring of the pulse wave, the ECG and an external analog signal (for example a doppler), and offers exact data about the patient's cardiovascular system.

To ease record analysis, select an analysis and diagnosis program; for long-period, several-minute ECG signal analysis select the rhythm analysis option.

You can upgrade the system to an exercise measurement workplace, since the new ECG generation offers automatic bicycle ergometer control as well. The program adapts flexibly to examining different types of patients, the safety devices support minimizing risk.
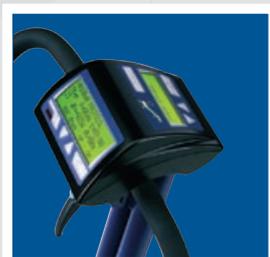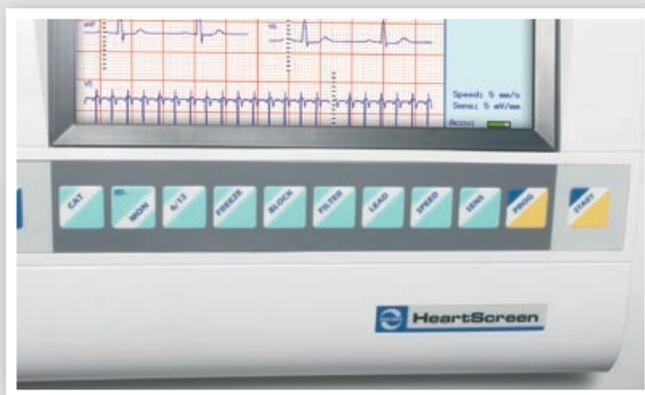
HeartScreen 112 Clinic PC connection

Information management systems are becoming increasingly important in patient care, where quick access to comprehensive critical information is a must for more efficient patient care and more favorable cost efficiency.

Even in its most basic construction, the HeartScreen 112 Clinic contains computer connection possibility, which — with the optional software — ensures a wide range of options for professional information applications.

Innomed's new cardiological information system — Innobase — offers users complete solution for the integration of the HeartScreen into the information systems.

The arrhythmia program makes it possible to monitor a patient for over several 10 minutes. The device automatically recognizes ventricular and supraventricular extras, wide beats, and other heart cycles that appear irregularly in time. In one operating mode the device only prints extras and their environments, not the regular beats. Another operating mode makes it possible to store and print the entire continuous ECG signal in uncompressed format. At the end of the recording the device creates statistics about extra types and displays minimum and maximum RR distances and RR deviation as well.