

GE Healthcare

MAC 400

Resting ECG System

***Making ECG available to every physician,
every patient, everywhere!***

Since 1965, GE has introduced technology innovation, which has profoundly impacted clinical guidelines and ECG standards. Through its collaboration with world-leading cardiologists, GE continues to develop ECG products to the highest standards of quality. With over 40 years' heritage in highly reliable ECG analysis and interpretation, you can trust the Marquette® 12SL™ program to support your clinical decisions.

The MAC® 400 is GE Healthcare's new compact electrocardiograph, specially designed to meet physicians' needs. It is reliable, accurate and benefits from GE's leadership in ECG technology including its well-known Marquette 12SL, which can be found in the premium ECG MAC products.

The lightweight and portable MAC 400 can be easily operated and allows you to configure it to your patient's needs for faster, more confident cardiac assessment and better patient care.

Portable. Easy-to-use. Trusted GE-ECG Quality.



Compact Line



Portable. Easy-to-use.

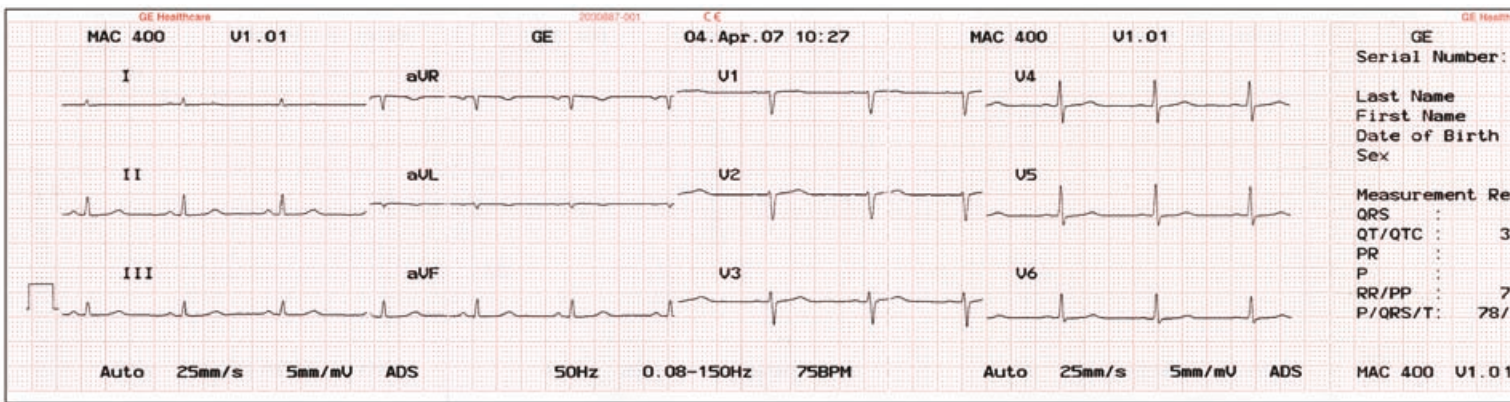
- **One Touch Operation**
for acquisition, analysis and printing, minimizes training needs.
- **Alphanumeric Display**
for easy visualization of ECG setup information.
- **Ultra Portable**
ECG device (with battery) of 1300 Gms, for easy transport.
- **Long-lasting Battery**
using Li-Ion platform, lasts for 100 ECGs in auto mode and recharges in less than 3 hours.
- **Reliable Printer Design**
to last for many years of trouble-free operation.
- **Wide Paper Size**
of 80 mm for clear visualization of ECG waveforms and reports.
- **Multiple ECG Modes**
(Auto, Manual & Arrhythmia) to allow you to adapt to your specific patient needs.
- **Reliable Decision Support Software Package Options**
such as **Marquette 12SL Measurement & Marquette 12SL Interpretation** are available to meet specific customer needs.

MAC 400 Supplies & Accessories

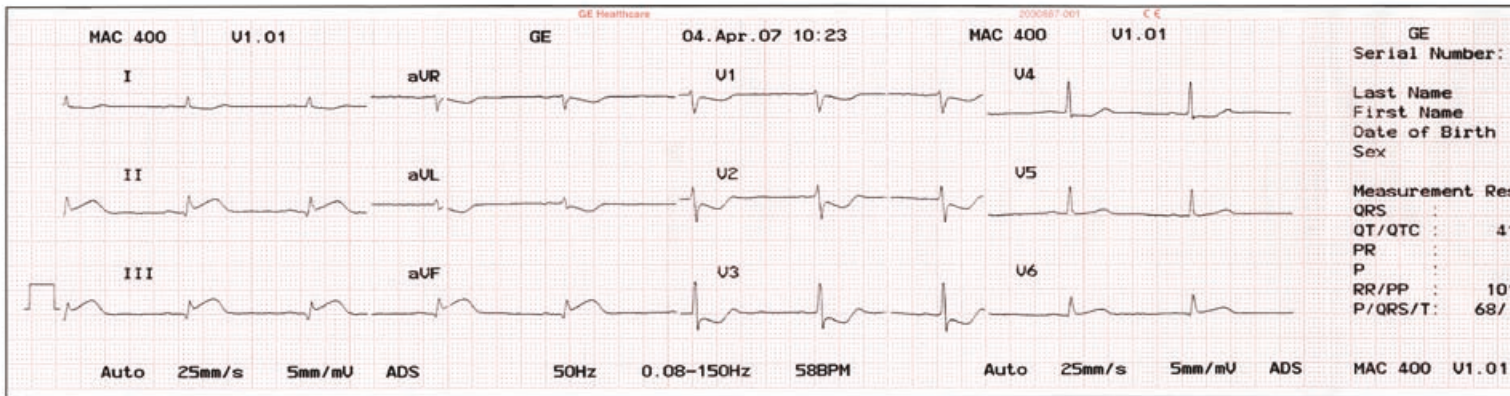
GE Healthcare offers a wide range of tested and approved quality accessories and consumables that are specifically designed to maintain the performance of the MAC 400.



Examples of ECG reports with Marquette 12SL analysis and interpretation program. The interpretation program is optional.



Normal ECG



Acute Inferior Wall Myocardial Infarction

Instrument Type

Microprocessor augmented automatic electrocardiograph;
10-leadwire acquisition with programmable lead configuration

Processing

Acquisition & Analysis	12 leads – simultaneous
Signal input	Type CF according to IEC. However, not intended for direct cardiac application.
Digital Sampling	>1000 samples/second/channel
ECG analysis frequency	500 samples/second/channel
Dynamic Range	AC Differential $\pm 5\text{mV}$, DC offset (Polarization voltage) $\pm 300\text{ mV}$
Resolution	5 μV
Frequency Response	0.01 to 150 Hz
Low cut-off frequency	0.01 Hz, 0.04 Hz, 0.08 Hz or 0.16 Hz (-3 dB limits), equivalent to a time constant of 16 s, 4 s, 2s or 1 s
High cut-off frequency	150 Hz (-3 dB limits), 35 Hz or 20 Hz if muscle filter is enabled
Common Mode Rejection	> 100 dB @ 50/60 Hz (AC filter switched on)
Input Impedance	> 10 $\text{M}\Omega$ @ 10 Hz Defibrillator protected
Patient leakage	< 10 μA
Operating modes	Automatic (12lead data), Manual (real-time data), Arrhythmia (continuous monitoring)
Lead Printout Sequence	Standard (Einthoven), Cabrera
Report formats	Automatic: simultaneous (short and long format), sequential (with and without rhythm)



04. Apr. 07 10:28 SCT06460003PA	GE 2020887-001 C C	04. Apr. 07 10:28
Interpretation: Normal sinus rhythm Normal ECG		
Results: 80 ms 74 / 420 ms 130 ms 92 ms 78 / 785 ms 74 / 80 Deg		
12SL v239	MAC 400 U1.01	12SL v239

04. Apr. 07 10:24 SCT06460003PA	GE GE Healthcare	04. Apr. 07 10:24
Interpretation: Sinus bradycardia Inferior infarct , possibly acute Marked ST abnormality, possible anteroseptal subendocardial injury ** ** ACUTE MI ** ** Consider right ventricular involvement in acute inferior infarct Abnormal ECG		
Results: 82 ms 16 / 411 ms 150 ms 98 ms 14 / 1015 ms 59 / 90 Deg		
12SL v239	MAC 400 U1.01	12SL v239

Heart rate meter	30 to 300 BPM $\pm 2\%$ or ± 1 BPM, whichever is greater. Heart rates outside this range will not be displayed.
Baseline Adjustment	Automatic adjustment of the baseline to the optimal recording range.
Anti-Drift System (ADS)	Automatic compensation of baseline
Lead-fail indication	Audible and visual indication of disconnected electrodes or line break; each single electrode is monitored except N/right leg
Software Options	Marquette 12SL ECG based measurement package gives QRS, QT/QTc, PR, P, RR/PP, and P/QRS/T Marquette 12SL ECG based analysis package for Analysis and Interpretation

Display

Type	LCD, 2 row x 16 character alphanumeric, with adjustable contrast.
Displayed Data	Selected Lead Group, Operation Mode, Lead Check, Heart Rate, AC Filter, Muscle Filter, Gain, Speed

Writer

Writer technology	Thermal array print head
Resolution	Vertical 8 dots/mm, horizontal 40 dots/mm at 25 mm/s
Number of traces	3 in automatic and arrhythmia modes, 1 or 3 in manual mode Annotation of device settings, date and time in the margin of recording strip
Writer speeds	5, 25, 50 mm/s
Writer sensitivity/gain	5, 10, 20 mm/mV
Paper type	Z-fold, Roll,
Paper size	Width 80mm, Z-fold Sheet length 90 mm, 280 sheets/pack Roll paper length 15.7 m
Writer speeds accuracy	Typical $\pm 1\%$, maximum $\pm 5\%$
Writer amplitude accuracy	$\pm 5\%$

Keyboard

Type	Membrane keypad with tactile feedback
------	---------------------------------------

Power Supply

Ratings	100 to 240 V $\pm 10\%$
Frequency	50/60 Hz $\pm 10\%$
Battery Type	Lithium ion, 7.2 V
Battery Charge Time	Approximately 3 hours
Battery charging	Automatic battery charging via built-in charger during line-power operation
Battery capacity	100 Automatic ECG recordings or operating time of 4 hrs without recording

Your local contact:

GE Healthcare
Munzinger Straße 3-5
79111 Freiburg, Germany
Tel. +49 761 4543 0 • Fax +49 761 4543 233

www.gehealthcare.com



GE imagination at work

Physical specifications

Width	263 mm
Height	78 mm
Depth	208 mm
Weight	1.3 kg/2.86 lb with battery

Environmental specifications

Temperature (with battery)

Transport/Storage	-15°C to +50°C
Operating	+10° to 40°C

Relative humidity

Transport/Storage	25-95%
Operating	25-95%

Pressure

Transport/Storage	500 to 1060 hPa
Operating	700 to 1060 hPa

Certification

- a) UL 60601-1 classified
- b) UL classified for CAN/CSA C22.2 No. 601.1
- c) CB certified for IEC 60601-1, IEC 60601-2-25
- d) CE marking for Council Directive 93/42/EEC concerning medical devices
- e) Meets applicable AAMI EC-11 requirements

Warranty

Standard Warranty is 1 year.

Ordering Information

Visit gehealthcare.com or contact your local GE Healthcare representative.

©2007 General Electric Company – All rights reserved. General Electric Company reserves the right to make changes in specifications and features shown herein, or discontinue the product described at any time without notice or obligation.

GE, GE Monogram, MAC®, Marquette® 12SL™ are trademarks of General Electric Company.

GE Medical Systems Information Technologies GmbH, a General Electric company, doing business as GE Healthcare.