ECG, MONITORS & ULTRASOUND

3 AND 6-12 CHANNEL DIGITAL ECG WITH HIGH RESOLUTION MONITOR

• 33334 CARDIOGIMA 3M - 1-3 ch. with interpretation
• 33350 CARDIOGIMA 6M - 3-6-12 ch. with interpretation (monitor 3-6 channels, printer 3-6-12 channels)
  - LCD monitor in Standard or Cabrera format with base line setting
  - High resolution thermal printer (8 dots/mm): hardcopy 1-3 or 3-6-12 channels real time with possibility to print a millimetric grid
  - Manual or automatic recording
  - Image freeze with memory scrolling for reviewing and hard copy of acquired signals (Memory 10 seconds for each lead)
  - Digital filters for elimination of muscle tremors, power line and base line noises.
  - Pacemaker detection
  - Power supply by built-in high capacity Ni-Cd batteries and fast charging time

- Very simple operation by pre-defined fast keys and menus
- Based on a risk processor for a full digital signal processing

Made in Italy.

STANDARD ACCESSORIES 3M AND 6M

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>CARDIOGIMA ACCESSORIES</th>
<th>Minimum order</th>
</tr>
</thead>
<tbody>
<tr>
<td>27139</td>
<td>Transport bag (see at page 34)</td>
<td>box of 20</td>
</tr>
<tr>
<td>32996</td>
<td>Thermal paper 58 mm x 25 m (Cardiogima 3M)</td>
<td>box of 10</td>
</tr>
<tr>
<td>32953</td>
<td>Thermal paper 112mm x 23m (Cardiogima 6M)</td>
<td>-</td>
</tr>
<tr>
<td>33328</td>
<td>ECG cable - spare</td>
<td>-</td>
</tr>
</tbody>
</table>

TECHNICAL SPECIFICATIONS CARDIOGIMA 3M AND 6M

Power supply: internal rechargeable Ni-Mh batteries
AC/DC Adapter: 100-240V, 50-60 Hz; 200mA
Battery autonomy: 2.5 hours
Applied part: CF type
Input impedance: > 100 Mohm
Frequency response: 0.05: 145hz
Cmrr: > 91 dB (33334), Cmrr: > 100 dB (33350)  Time constant: > 3.2 s
Acquisition: 12 bit 800 samples/sec/channel-isochrome
Leads: 12 standard or Cabrera

\[\text{Sensitivity: 5mm/mV; 10mm/mV; 20mm/mV \pm 5\%}\\ \text{Scrolling speed: 5mm/s; 10mm/s; 25mm/s; 50mm/s}\\ \text{Signal memory: 10s for each lead}\\ \text{Printer: thermal printer 8 dots/mm, paper 58 mm (3M) 110 mm (6M).}\\ \text{Filters: muscles tremors 35Hz digital; power line interferences 50-60Hz digital; high pass 0.5Hz digital}\\ \text{Defibrillation protection: internal}\\ \text{Display/Hardcopy: 1/3 channel (3M) 3/6/12 channel (6M)}\\ \text{Dimensions: 240 x 160 x 65 mm. Weight: 1.5 kg. Made in Italy}\\

CARDIOGIMA 1M - 1/3 CHANNEL ECG WITH PARAMETERS CALCULATION

• 33329 CARDIOGIMA 1 M - 1-3 channel ECG with monitor
  A real portable ECG with small dimension and light weight, with LCD monitor 128x64 pixel, high resolution thermal printer (8 dots /mm hardcopy, 1 channel real time) and parameters calculation. With manual or automatic recording, memory 10 seconds for each lead. Includes digital filters for elimination of muscles tremors, power line and base line noises. Based on a risk processor for a fully digital signal processing. Made in Italy.
• 32996 THERMAL PAPER 58 mm x 25 m - box of 20
• 33328 ECG CABLE - spare

- Very simple operation by pre-defined fast keys and menus
- Based on a risk processor for a full digital signal processing

Made in Italy.

STANDARD ACCESSORIES

<table>
<thead>
<tr>
<th>Patient cable</th>
<th>1 roll of paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 bottle of gel</td>
<td>4 limb electrodes</td>
</tr>
<tr>
<td>Manual (English, Italian)</td>
<td>6 chest limb electrodes</td>
</tr>
</tbody>
</table>

TECHNICAL SPECIFICATIONS

Power supply: internal rechargeable Ni-Mh batteries
AC/DC Adapter: 100-240V, 50-60 Hz; 200mA
Battery autonomy: 2 hours
Applied part: CF type
Input impedance: > 100 Mohm
Frequency response: 0.05: 145hz
Cmrr: > 91 dB (33329)  Time constant: > 3.2 s
Acquisition: 12 bit 800 samples/sec/channel
Leads: 12 standard or Cabrera
Sensitivity: 5mm/mV; 10mm/mV; 20mm/mV ±5%
Scrolling speed: 5mm/s; 10mm/s; 25mm/s; 50mm/s
Signal memory: 10 sec for each lead
Printer: thermal printer 8 dots/mm, paper 58 mm.
Defibrillation protection: internal

Filters: muscles tremors 35Hz digital; power line interferences 50-60Hz digital; high pass 0.5Hz digital
Dimensions: 190 x 120 x 60 mm. Weight: 1 Kg. Conformity standards: 93/42/CEE; EN60601-1; EN60601-1-2; IEC601-2-25 Made in Italy

3 YEARS WARRANTY made in Italy
SMART SINGLE AND THREE CHANNEL ECG

**TECHNICAL SPECIFICATIONS**

**Input Circuit:** floating input circuit, protection from defibrillation and pacemaker

**Lead:** Single 12 leads simultaneously

**Time constant:** > 3.2 s

**Sensitivity:** 2.5, 5, 10, 20, mm/mV

**Input impedance:** > 50 MΩ

**Anti baseline drift:** Automatic

**Filter:**
- EMG Filter 35 Hz (-3 dB)
- EMG Filter 25/35/40 Hz off
- AC/DFT Filter 50 Hz/60 Hz
- DFT Filter 0.05/0.15 Hz/0.25/0.5 Hz
- Low pass filter 150/100/75 Hz
- AC Filter 50 Hz/60 Hz

**CMRR:** > 90 dB

**Recording mode:** Auto/Manual

**Rhythm lead:** Any lead selectable

**Safety standard:** IEC I/CF

**Power supply:** AC: 100V-115 V/220V-240V, 50/60 Hz

**Rechargeable Li-ion battery:** voltage 14.8V

**More than 3 hours continuously operation under battery supply**

**Recorder:** Thermal printer

**Record paper:** 50mmx30m, 80mmx20 m

**Paper speed:** 25mm/s, 50 mm/s ± 3%

**Dimension:** 288mmx210mmx70mm

**Weight:** 2.3 kg (with battery) 2.5 kg (with battery)

**Display:** 192x64 pixel LCD, 320x240 pixels LCD (Wide screen)

**Language selectable:** Eng, Ita, Spa, Fra, Russian

**Interface:** Ethernet, RS232, USB

**STANDARD ACCESSORIES**

- Patient cable
- 1 bottle of gel
- Manual: English, Italian,
  (Spanish, French, Turkish, Russian (only SE3), on request)
- 1 CD software and cable for connection to PC
- 1 roll of paper
- 4 limb electrodes
- 6 chest limb electrodes
- Rechargeable battery

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PORTABLE ECG - 1 and 3 channel

- Complete digital design
- Folding up LCD display waveforms, parameters configurable
- High resolution thermal printing
- Built-in rechargeable Li-ion battery, AC/DC supply
- Complete digital filter, avoid baseline drift, AC, EMG interference
- Baseline automatic adjustable, optimize printing position
- Auto/manual operation selectable
- Lead-off detection and display

Three channel ECG also features

- 12 Lead simultaneous acquisition
- Automatic ECG parameters measurement and analysis
- Selectable printing format: Auto, manual, rhythm
- Support USB ink-jet printer for 12 leads printing

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CARDIOPOCKET ECG - 1 CHANNEL

- **33257 CARDIOPOCKET ECG - with software**
- **32963 THERMAL PAPER - box of 20 rolls**

Compact and lightweight pocket device with unbeatable features:

- wide graphic display (it allow “live” view of ECG trace and selection of all parameters)
- rechargeable lithium battery operated (80 ECG with fully charge)
- PC software with interpretation included for storing data into PC (English/Italian)
  (operation system: Microsoft Windows 2000/XP/2003/Vista/7)
- multilanguage internal software: English, Italian, German, French, Spanish, Chinese, Turkish
- standard 12 leads ECG
- real time continuous records of clear and exact single channel ECG waveform and notes. The notes include mark, sensitivity, chart speed, filter mode, etc
- full-touch keyboard control, easy to operate. Screen displays, working position, state of the instrument are clear and easy to be read.

---

GIMA code SMART ECG AND ACCESSORIES

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>SMART ECG AND ACCESSORIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>33330</td>
<td>Smart SE-1 Single Channel ECG</td>
</tr>
<tr>
<td>33332</td>
<td>Smart SE-3 Three Channel ECG - interpretative</td>
</tr>
<tr>
<td>33336</td>
<td>ECG-Viewer Software (English and Italian)</td>
</tr>
<tr>
<td>32963</td>
<td>Thermal paper - 50mm x 25m for 33330 and 33305</td>
</tr>
<tr>
<td>32964</td>
<td>Thermal paper - 80mm x 25m for 33332/3 and 33306</td>
</tr>
<tr>
<td>33328</td>
<td>ECG cable - spare</td>
</tr>
<tr>
<td>33318</td>
<td>Rechargeable Lithium battery 2200 mAh - spare</td>
</tr>
<tr>
<td>27139</td>
<td>Transport bag - see page 34</td>
</tr>
</tbody>
</table>

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GIMA code CARDIOPOCKET ECG - 1 CHANNEL

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- rechargeable lithium battery operated (80 ECG with fully charge)
- PC software with interpretation included for storing data into PC (English/Italian)
  (operation system: Microsoft Windows 2000/XP/2003/Vista/7)
- multilanguage internal software: English, Italian, German, French, Spanish, Chinese, Turkish
- standard 12 leads ECG
- real time continuous records of clear and exact single channel ECG waveform and notes. The notes include mark, sensitivity, chart speed, filter mode, etc
- full-touch keyboard control, easy to operate. Screen displays, working position, state of the instrument are clear and easy to be read.

---

**Power:** AC: 100-240V, 50/60 Hz - DC: 12V rechargeable battery

The instrument could normally work for more than 0.5 hours under DC supply

**Noise level:** ≤15µVp-p

**CMRR:** >100 dB

**EMG filter:** 35 Hz

**Time constant:** ≥3.2 s

**Sensitivity display:** standard sensitivity: 10mm/mV ±5%

**Sensitivity setting:** 1/2, 1, 2 (cm/mV), conversion deviation≤5%

**Recording system:**
- thermal-array, 8 dots/mm (vertical),
- 16 dots/mm (horizontal, 25mm/sec)

**Paper speed:** 25mm/s - 50mm/s ±5%

**Recording paper:** 25mm/s - 50mm/s ±5%

**Safety standard:** IEC class I, type CF

**Input circuit current:** ≤100mA

**Fuse standard:** AL 220V/2A

**Weight:** 800 g (with rechargeable battery and paper)

**Dimension:** 190x90x40 mm

---

**TECHNICAL SPECIFICATIONS**

**Input Circuit:** floating input circuit, protection from defibrillation and pace maker

**Lead:** Single 12 leads simultaneously

**Time constant:** > 3.2 s

**Sensitivity:** 2.5, 5, 10, 20, mm/mV

**Input impedance:** > 50 MΩ

**Anti baseline drift:** Automatic

**Filter:**
- EMG Filter 35 Hz (-3 dB)
- EMG Filter 50 Hz/60Hz (-20 dB)
- AC/DFT Filter 50 Hz/60 Hz
- DFT Filter 0.05/0.15 Hz/0.25/0.5 Hz
- Low pass filter 150/100/75 Hz
- AC Filter 50 Hz/60 Hz

**CMRR:** >90dB

**Recording mode:** Auto/Manual

**Rhythm lead:** Any lead selectable

**Safety standard:** IEC I/CF

**Power supply:** AC: 100V-115 V/220V-240V, 50/60 Hz

**Rechargeable Li-ion battery:** voltage 14.8V

**More than 3 hours continuously operation under battery supply**

**Recorder:** Thermal printer

**Record paper:** 80mmx20 m

**Paper speed:** 5mm/s, 6.25 mms, 12.5mm/s, 25mm/s, 50 mm/s

**Dimension:** 288mmx210mmx70mm

**Weight:** 2.3 kg (with battery) 2.5 kg (with battery)

**Display:** 192x64 pixel LCD

**Display language selectable:** Eng, Ita, Spa, Fra, Russian

**Interface:** Ethernet, RS232, USB

---

**STANDARD ACCESSORIES**

- Patient cable
- 1 roll of paper
- 1 rechargeable lithium battery
- 4 limb electrodes
- 6 chest limb electrodes
- 1 user manual (English)
- 1 CD software and cable for connection to PC

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Integrated thermal printer

Compact: only 19 cm

60x35 mm wide display

STANDARD ACCESSORIES

- 1 roll of paper
- 4 limb electrodes
- 6 chest limb electrodes
- Rechargeable battery
SMART 6 AND 12 CHANNEL ECG

PORTABLE ECG: 6 AND 12 CHANNEL

Portable unit
Compact design, lightweight with carrying handle 5.7 inch high-resolution screen (33309) or 12.1 inch high-resolution colour fold up touch-screen (33310).

Various Methods of data transfer
USB interface for patient record transmission ethernet or RS-232 interface for networking or data transmission to PC

Unique features
Standby mode for saving energy and extending LCD life
Various printing formats
Freeze real time waveform and record with selected format
Alphanumeric keyboard
Easy to use and analyze
Single button operation for data printing and storage
Built-in rechargeable lithium battery
Automatic detection and record of arrhythmia
Last 120 seconds waveforms reviewable and recordable
Internal data storage for up to 100 digital ECG records (33309) or 200 (33310):
Accurate ECG interpretation programme

3/6/12 CHANNEL ECG WITH COLOUR DISPLAY AND INTERPRETATION

TECHNICAL SPECIFICATIONS
SE-6 six-channel ECG / SE-12 express twelve channel ECG

One time record: 3/6/12 channels
Width of record: 112mm
Outside USB printer: printout A4 (210x297)
Record speed: 5/10/25/50 mm/s
Sensitivity: 2,5/10/20 mm/mV
Digital filtration of disturbances:
20 Hz - 60 Hz
Display: 5.7” graphic, color TFT 320x240
Analysis and interpretation:
HES compliant with EN 60601-2-51
Internal memory: >300 tests
Alphanumeric keyboard
Detection of stimulator impulses
pacemaker
Automatic regulation of isoelectric line
Constant measurement of heart action (HR)
Acoustic signalization of detected
stimulations
Paper easy-load
Signalingization of wrong connection with particular electrodes
CMRR: >100dB
Leads: 12 standard/Cabrera
Input channels: floating, protected from impulse defibrillating CF
Power: 90-240V, 50/60Hz
Inside rechargeable battery: Li-ion 7,2V
Power consumption: <30VA
Dimensions: 260x220x52mm
Weight: < 1.8 Kg
Standards: EN 60601-1, EN 60601-1-2, EN 60601-2-25, EN 60601-2-51
Class/Group: Class A/Group 1 (CISPR-11)

STANDARD ACCESSORIES
Patient cable 10 leads
1 bottle of gel
1 power cable
CD manual (English, Italian)

3/6/12 CHANNEL ECG
33309 SE-6

PC software: smart ECG viewer (optional)
12 channel ECG also features
12.1 inch high-resolution colour fold up touch-screen
Internal storage for 200 patient data
Preview of waveforms and analysis result before printing
Freeze and replay the waveform to detect arrhythmia
Waveforms reviewable, adjustable and recordable to meet different needs
Analysis of heart rate variability (HRV)

3/6/12 CHANNEL ECG
33310 SE-12 Express

STANDARD ACCESSORIES
Patient cable
1 bottle of gel
1 power cable
CD manual (English, Italian)

33307 CARDIOGIMA COLOUR ECG 3/6/12 CHANNELS
3/6/12 channels electrocardiograph with analysis, HES interpretation and software.
- Internal memory for more than 300 tests
- Pacemaker detection
- LCD TFT color display 5.7”
- USB output for printing A4 with external printer
- PC software for data management
Made in Europe.

• 32953 THERMAL PAPER 112 mm x 23 m - box of 10

TECHNICAL SPECIFICATIONS

One time record: 3/6/12 channels
Width of record: 112mm
Outside USB printer: printout A4 (210x297)
Record speed: 5/10/25/50 mm/s
Sensitivity: 2,5/10/20 mm/mV
Digital filtration of disturbances:
20 Hz - 60 Hz
Display: 5.7” graphic, color TFT 320x240
Analysis and interpretation:
HES compliant with EN 60601-2-51
Internal memory: >300 tests
Alphanumeric keyboard
Detection of stimulator impulses
pacemaker
Automatic regulation of isoelectric line
Constant measurement of heart action (HR)
Acoustic signalization of detected
stimulations
Paper easy-load
Signalingization of wrong connection with particular electrodes
CMRR: >100dB
Leads: 12 standard/Cabrera
Input channels: floating, protected from impulse defibrillating CF
Power: 90-240V, 50/60Hz
Inside rechargeable battery: Li-ion 7,2V
Power consumption: <30VA
Dimensions: 260x220x52mm
Weight: < 1.8 Kg
Standards: EN 60601-1, EN 60601-1-2, EN 60601-2-25, EN 60601-2-51
Class/Group: Class A/Group 1 (CISPR-11)

STANDARD ACCESSORIES
Patient cable 10 leads
1 bottle of gel
1 power cable
CD manual (English, Italian)
**ECG, MONITORS & ULTRASOUND**

**MULTI CHANNEL ECG WITH INTERPRETATION ON PAPER**

- 33354 CARDIOMEGA 12 M ECG - 3-6-12 channel
- 33355 CARDIOLINE: BIONET:
  - Lowing ECG machines:
    - 33328 ECG cable - 10 leads
    - 33355 CARDIOGIMA 12 M ECG - 3-6-12 channel
  - Standard accessories:
    - 1 PC software (English/Italian)
    - 1 Recorder: Thermal print head, thermal paper roll
    - 1 Power cable
    - 1 LED indicator: signal quality, power source, battery
    - 1 Power: AC or DC
    - 1 Report papers: width: A4: 210 mm or 8.5”
    - 1 Keyboard: Membrane keyboard, alphanumeric and symbol available
    - 1 Display: 2x16 character LCD display (code 33354)
    - 1 Printing speed: 12,5; 25; 50 mm/s
    - 1 Resolution: vertical: 8 dots/mm, horizontal: 16 dots/mm
    - 1 ECG Leads: 3, 6, 12 channel illustration of ECG signals in continuous
    - 1 Recorder: Thermal print head, thermal paper roll
      - 1 Input circuit: floating input
    - 1 Power: Power supply: AC or DC
      - 1 Basic measurement: Heart rate, PR, QRS, QTc, P-R-T axis
      - 1 Frequency response: 0.05~150 Hz
      - 1 Electrical: Internal noise: 20μV (p-p) max
      - 1 Resolution: vertical: 8 dots/mm, horizontal: 16 dots/mm
      - 1 Sensitivity: 2,5 (only 33355) 5, 10, 20, auto (I~aVF: 10, V1~V6: 5) mm/mV
      - 1 Recording channel: 3, 6, 12 channel and 1 channel (60 sec)
      - 1 Low pass filter: (off, 40 Hz, 100 Hz, 150 Hz)
      - 1 Display: 480x272 colour TFT LCD display (3 and 12 channel preview) (code 33355)
      - 1 SPIROMETER MODULE - for code 33355
        - It transforms CARDIOGIMA 12M in a 2 in 1 system: ECG-SPIROMETER.
        - Spirometry measuring values:
          - MVV: FEV 1, FEV 1/FVC, FEV 0.2-1.2L, FIVC, FEV 25-75, FEV 75-85%,
            PEF, FEF 200-1200 ml, FEF 25%, FEF 50%, FEF 75%, FIF 50%,
            PIF, FET 100%, FVC,
            SVC: SVC, ERV, IRV, TV, EC, IC, BC
        - MVV: RR, TV, MVV
        - Pre and post bronchodilator comparison.
        - Presentation: flow volume loop, flow time plot, measurement values table. Compiles with ATS standard.

**STANDARD ACCESSORIES**

- 1 Patient data: ID, name, age, sex, height, weight
- 1 Technical specifications 33354 - 33355
  - ECG Leads: 3-6-12 channel illustration of ECG signals in continuous
  - Recording channel: 3, 6, 12 channel and 1 channel (60 sec.)
  - Sensitivity: 2.5 (only 33355) 5, 10, 20, auto (I~aVF: 10, V1~V6: 5) mm/mV
  - Printing speed: 12.5, 25, 50 mm/s
  - Filters: AC (50/60 Hz, -20 dB or better)
  - Resolution: vertical: 8 dots/mm, horizontal: 16 dots/mm
  - Display: 2x16 character LCD display (code 33354)
  - Resolution: vertical: 8 dots/mm, horizontal: 16 dots/mm
  - Power: Power supply: AC or DC
  - Frequency response: 0.05-150 Hz
  - Power requirement: 100-240 Vac, 50/60 Hz, 1.0-0.5 A
  - Power consumption: 60 W max
  - Battery capacity: 1 hour of normal use (approx. 100 automatic ECG printouts)
  - Communication: PC Connection with RS-232 interface and lan
  - Safety: Class I, Type BF
  - Conformity: CE, CSA Made in Korea

**ECG CABLE COMPATIBLE WITH MOST ECG BRANDS**

- 33354 ECG cable - 10 leads
  - Long lasting, individually tested cable compatible with the following ECG machines:
    - BIONET: Cardiocare, Cardiotouch
    - CARDIOLINE: E1, E1R, E3, Delta 300, Delta 360 C3.
    - CARDIETTE: Chinese (Trentina): Autoreulor 12/1, Autoreulor 12/3,
      Excel 103, Excel 106, Astron Comp 1, Astron Comp 3, Astron Comp
      6, Start 100 P, Start 100 H, Start 200, Start 200HV, AR600, AR 600
      ADV, AR1200, AR1200, ADV.
    - CARDOVAPID CAMINA: K111, K112, K33, K36, K300 M, K300 P,
      K600 P, K600 D, K130 B, K 130 D.
  - EDAN: Smart SE-1, SE-3
  - ESAOTE P80, P8000
  - GIMA: CARDIOGIMA 1M, 3M, 6M, 12, 12M
  - HP: Pagewriter 1513, 154B/C, 1514D, 1515A/B, 1517A.
  - KONTRON EKG P80
  - MACQUAIRE CT100, CT200.
  - M4 MEDICAL: M traces
  - NIHON - KOHDEN Cardiofax 651, 6581, E1200.
  - PROGETTI all models: EPG junior, EPG view, EPG6 view plus
  - SCHILLER AT1, AT2, AT3, AT4A, AT5, AT6, AT10, AT110, CS6, CS12, CS100,
    CV6, P80.

**SOFTWARE INCLUDED FOR DATA STORAGE ON PC**

- Enhanced memory function  save up to 120 patients’ data

**33356**

- Made in Italy

**FDA Approved**

**Other ECG accessories at page 183-184**
ECG Memory and Transfer: Storage memory for 120 ECGs, with easy transfer by LAN connection, Base line drift, artifact, AC, and low and high pass frequency filters

ECG Acquisition: Up to 12 leads for both adult and pediatric patients (capacity 3 hours - 300 ECG, charging time 8 hours)

- 33803 THERMAL PAPER - box of 10 packs
- portable, lightweight design with rechargeable Li-ion battery (300 events)
- 7 inch colour touch screen TFT (800x480) LCD monitor
- Z-fold printer in A4 size prevent rolled paper problem
- User friendly
  - multilanguage internal software (Eng-Ger-Rus-Ita-Spa-Fra-Chi-Kor)
  - configurable report option for cardiologist
- for both adult and pediatric patients
- ECG signal acquisition and interpretation of up to 12 leads
- one-touch operation for analysis, storage and printing in 5 second
- optional wireless patient module offers full freedom

High quality
- 33302 WIRELESS MODULE
- 33303 CARDIO XP 12 CHANNEL ECG

Disclose (1 minute of continuous waveform data for 1 selected lead)

Report Formats: 3 channels + 1 Rhythm, 3 channels + 3 Rhythm, 6 channels + 1 Rhythm, 12 channels

FCG CAD gram to locate coronary artery disease and ischemia

3D-VCG tool to detect myocardial infarction

CD software & USB memory

1 Rhythm, 12 channels

Symptom interpretation program provides configurable levels of interpretive, reason and severity statements that are printed on the ECG report

Same as code 33320 but with the following specialist functions:
- Timed vector-cardiograph (TVCG), Frequency ECG (FCG, particular technique to detect ischemia and CAD), High Frequency ECG (HFECG), SAECG (VLP) analysis (Signal Averaged ECG or Ventricular Late Potentials, time domain and 3D frequency domain), QT dispersion analysis (QT dispersion with chroma map, Heart Rate Variability (HRV) (time domain, 3D frequency domain, Lorenz poincare plots), Pacemaker analysis, Heart rate turbulence (HRT, or VE chaos).

TECHNICAL SPECIFICATIONS

Communication port: USB - Support HL7, Dicom interface
Size: 196x143x30 mm - 550 g
Power source: 5V DC (from PC USB port)
Patient insulation: 4000 V AC
Defibrillation protection: built in box
PC minimum requirements: Windows 2000, XP Vista and Windows 7

STANDARD ACCESSORIES

4 limb electrodes
6 chest electrodes
Patient cable & leads
USB pen driver
CD software
Ground cable
Banana plug

Sensitivity: 2.5, 5, 10, 20, autocal(–AV: 10, V1~V6 5) mm/mV
Printing speed: 12, 25, 50 mm/sec
Patient data: ID, name, age, birth, gender, height, weight, smoke, depart, race...
Battery Capacity (Li-Ion): Internal Storage for 120 ECGs built-in memory
ECG Storage: External Storage: SD Card or USB Memory
Time Constant: 3.2 sec
CMRR: More than 100dB
Line Power: 95 ~ 240 VAC, 50/60Hz, 60 VA max
Dimensions: 299 x 298 x 123 mm (11.8 x 11.7 x 4.8 inch)
Weight: 4.5 kg (9.9 lb)
Out Interface: USB 1: Host (Memory)

CARDIO XP 12 CHANNEL ECG WIRELESS OPTION

- 33302 CARDIO XP 12 CHANNEL ECG
- 33303 WIRELESS MODULE

Easy and fast typewriting by external USB keyboard (optional)
- 33303 THERMAL PAPER - box of 10 packs
- 33304 LI-ION BATTERY - 111 V - 4400 mAh - optional (capacity 3 hours - 300 ECG, charging time 8 hours)

ECG Acquisition: Up to 12 leads for both adult and pediatric patients
Base line drift, artifact, AC, and low and high pass frequency filters

ECG Memory and Transfer: Storage memory for 120 ECGs, with easy transfer by LAN connection, SD card & USB memory

ECG Interpretation: The cardiograph includes the 12-Lead algorithm for interpretive analysis of the amplitudes, durations and morphologies of ECG waveforms and associated rhythm for adult and pediatric patients

This clinically proven interpretation program provides configurable levels of interpretive, reason and severity statements that are printed on the ECG report

User Interface: Touch screen (alphanumeric and symbol)
Rotary push-knob (POP-UP menu)
Display: 800 x 480 pixel resolution. 7" Color TFT wide display
Filters:
- AC(50/60 Hz, -20dB or better)
- Muscle(25~35Hz, -3dB or better)
- Low pass filter(off, 40Hz, 100Hz, 150Hz)

Printer Resolution:
- Thermal print head, Z-fold paper
  - Paper report width: A4(210mm) or Letter(8.5”), length: A4(300mm) or Letter(11”)]
  - Resolution: 8 dots/mm(0.125mm pitch)

Report Formats:
- 3 channels + 1 Rhythm, 3 channels + 3 Rhythm, 6 channels + 1 Rhythm, 12 channels
- Disclosure (1 minute of continuous waveform data for 1 selected lead)

STANDARD ACCESSORIES

1 PC software (English/Italian)
4 ECG clip-on electrodes
1 Patient cable - 10 leads
6 Chest electrodes,
1 Power cable
Manual English/Italian

TECHNICAL SPECIFICATIONS

ECG Acquisition:
- Up to 12 leads for both adult and pediatric patients
- Base line drift, artifact, AC, and low and high pass frequency filters

ECG Memory and Transfer:
- Storage memory for 120 ECGs, with easy transfer by LAN connection, SD card & USB memory

ECG Interpretation:
The cardiograph includes the 12-Lead algorithm for interpretive analysis of the amplitudes, durations and morphologies of ECG waveforms and associated rhythm for adult and pediatric patients

This clinically proven interpretation program provides configurable levels of interpretive, reason and severity statements that are printed on the ECG report

User Interface:
- Touch screen (alphanumeric and symbol)
- Rotary push-knob (POP-UP menu)

Display:
- 800 x 480 pixel resolution. 7" Color TFT wide display
- 12 channels preview (3x4 or 6x2 channels)

Filters:
- AC(50/60 Hz, -20dB or better)
- Muscle(25~35Hz, -3dB or better)
- Low pass filter (off, 40Hz, 100Hz, 150Hz)

Printer Resolution:
- Thermal print head, Z-fold paper
  - Paper report width: A4(210mm) or Letter(8.5”), length: A4(300mm) or Letter(11”)]
  - Resolution: 8 dots/mm(0.125mm pitch)

Report Formats:
- 3 channels + 1 Rhythm, 3 channels + 3 Rhythm, 6 channels + 1 Rhythm, 12 channels
- Disclosure (1 minute of continuous waveform data for 1 selected lead)
PALM ECG: CARDIO-A AND CARDIO-B - SINGLE CHANNEL

PALM ECG’s are designed for general practitioners or for domestic users who suffer from cardiovascular diseases such as hypertension, coronary disorders, giving the possibility of a daily ECG test. Records can be saved and used as a reference for clinical applications.

4 measurement modes: palm, leg, chest or lead wire traditional measurement.

Main features:
- small, portable and easy to use
- 30 second ECG waveform and measurement result
- 24 (cardio A) or 300 (cardio B) ECG waveform can be saved
- Analysis and report of 9 types (CARDIO A) and 17 types (CARDIO B) of ECG waveform
- USB interface with option data cable and ECG viewer software
- Traditional measurement with optional ECG cable

GIMA code | PALM ECG AND ACCESSORIES
---|---
33260 | CARDIO-A palm ECG
33261 | CARDIO-B palm ECG-colour display
33265 | ECG viewer software+USB cable - optional
33264 | ECG lead cable - 3 leads - optional

HOLTER ECG SYSTEM - 24 HOURS MONITORING

HOLTER ECG SYSTEM includes ECG recorder and software connectable to a computer system or laser printer. The recorder has built-in flash storage media to increase memory capacity. The sampling rate of 1,000 sampling/sec has improved the quality of waveform.

Accuracy of the system is ensured by AHA and MIT data.

Features:
- windows software interface
- quick and accurate analyzing system
- special editing system of R point
- perfect analysis function of ST segment
- analysis function of T wave of all channels and T wave trend graph
- review of ECG trend graph
- analysis system of HR variability, providing regular SDNN, SDANN, RMSSD, LF, HF, time domain and frequency domain
- QT analysis and QT trend graph
- acquire pacing ECG directly without separate channel; Also have the functions of VCG, VLP, TVCG, HRT, TWA. (option)

Recorder:
- 12 channel Synchronized ECG Acquisition
- small ECG recorder with OLED colour screen to display real time ECG waveform and review storage data.
- capacity up to 2G
- selectable sampling rate, 200, 500, 1,000 sampling/sec
- sampling accuracy: 12 bit
- built-in FLASH storage media, to prevent the flash card from damage due to repeated insertion and pull out
- USB interface
- Operating system: Windows 98, 2000, XP, 7

TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>CARDIO A</th>
<th>CARDIO B</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECG bandwidth:</td>
<td>0.5 Hz - 40 Hz</td>
</tr>
<tr>
<td>Heart rate measuring range:</td>
<td>30 - 240 bpm ± 2 bpm</td>
</tr>
<tr>
<td>LCD back light display:</td>
<td>128x64 dot matrix</td>
</tr>
<tr>
<td>Display size:</td>
<td>49x25 mm</td>
</tr>
<tr>
<td>240x160 dot matrix</td>
<td></td>
</tr>
<tr>
<td>57.6x40mm</td>
<td></td>
</tr>
<tr>
<td>Power:</td>
<td>2AA batteries</td>
</tr>
<tr>
<td>Dimensions:</td>
<td>115x58x18mm</td>
</tr>
<tr>
<td>Weight:</td>
<td>65g</td>
</tr>
<tr>
<td>125x70x21.5mm</td>
<td></td>
</tr>
<tr>
<td>106g</td>
<td></td>
</tr>
</tbody>
</table>

STANDARD ACCESSORIES

1 Holter recorder
1 CD with software
10 leads patient cable
10 disposable ECG sensor
1 pouch for hanging recorder
1 USB cable for data downloads
1 USB security key
Instruction Manual (English, Italian)
**SONY PRINTER AND PAPER**

- **Size:** 154x240xh 88 mm

**SONY PRINTERS AND PAPER**

- **33967 SONY PRINTER UP-897 MD** - black/white
  Produces A6 size printings in about 2 seconds, with superb print quality with 325 dpi and grey level of 256 steps. 110-240 V AC, 50/60 Hz.

- **33991 SONY COLOUR PRINTER UP-21 MD**
- **33992 SONY A4 COLOUR PRINTER UP-D77MD** SONY PAPERS.

- **72730 SONY PAPER** - UPP-110 HD - box of 5 rolls
  High density printing paper - 110mm x 20 m
- **72731 SONY PAPER** - UPP-110 HG - box of 5 rolls
  High glossy printing paper - 110mm x 18 m
- **72732 SONY PAPER** UPP-110S - box of 5 rolls
- **72733 SONY PAPER** UPP-110HA - box of 5 rolls
- **72735 SONY COLOUR PAPER UPC-21L** (4 ink rolls + 200 supports 144x100 mm)

---

**GIMA ECG THERMAL PAPERS** FOR DIFFERENT ECG BRANDS

**ECG, MONITORS & ULTRASOUND**

**GIMA VIDEOPRINTER PAPER**

**COMPATIBLE WITH MOST VIDEO PRINTERS**

- **72721 VIDEOPRINTER PAPER - roll 110 mm x20 m**

**GIMA VIDEOPRINTER PAPER-COMPATIBILITY LIST**

<table>
<thead>
<tr>
<th>List of compatible printers</th>
<th>Alternative to papers</th>
<th>No of prints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitsubishi electric P-66/16/65/66/67/50/91</td>
<td>K-61 B, K-65 HM</td>
<td>200</td>
</tr>
<tr>
<td>Aloka SSZ-300 S</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Hellige SSZ-300</td>
<td>226 149 01</td>
<td>100</td>
</tr>
<tr>
<td>Hewlett-Packard 77510 A</td>
<td></td>
<td>200</td>
</tr>
</tbody>
</table>

**SONY PAPERS**

- **72733 SONY PAPER UPP-110HA - box of 5 rolls**
- **72735 SONY COLOUR PAPER UPC-21L** (4 ink rolls + 200 supports 144x100 mm)
CREAM, ELECTRODES AND ADAPTORS FOR MOST ECG

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>UNIVERSAL REUSABLE ECG ELECTRODES</th>
<th>Minimum order</th>
</tr>
</thead>
<tbody>
<tr>
<td>33363</td>
<td>Set of 4 limb clamp electrodes (4 colours) pediatric</td>
<td>1 set</td>
</tr>
<tr>
<td>33364</td>
<td>Set of 4 limb clamp electrodes (4 colours) adult</td>
<td>1 set</td>
</tr>
<tr>
<td>33368</td>
<td>Set of 6 chest electrodes Ø 15 mm- silver coated</td>
<td>1 set</td>
</tr>
<tr>
<td>33365</td>
<td>Set of 6 chest electrodes Ø 24 mm- silver coated</td>
<td>1 set</td>
</tr>
<tr>
<td>33369</td>
<td>Set of 6 chest electrodes Ø 30 mm- silver coated</td>
<td>1 set</td>
</tr>
<tr>
<td>33323</td>
<td>Set of 6 chest electr. Ultra Ø 24 mm - silver coated</td>
<td>1 set</td>
</tr>
<tr>
<td>33324</td>
<td>Set of 6 chest electr. Ultra Ø 30 mm - silver coated</td>
<td>1 set</td>
</tr>
</tbody>
</table>

UNIVERSAL DISPOSABLE ECG ELECTRODES AND ADAPTORS

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>ECG, MONITORS &amp; ULTRASOUND</th>
<th>Minimum order</th>
</tr>
</thead>
<tbody>
<tr>
<td>33325</td>
<td>Disposable FOAM electrodes Ø 43-45 mm - solid gel</td>
<td>1,250 pcs.</td>
</tr>
<tr>
<td>33326</td>
<td>Disposable TNT electrodes Ø 43-45 mm - solid gel</td>
<td>1,250 pcs.</td>
</tr>
<tr>
<td>33327</td>
<td>Disposable TNT electrodes Ø 55 mm - solid gel</td>
<td>1,200 pcs.</td>
</tr>
<tr>
<td>33344</td>
<td>Disposable FOAM electrodes Ø 48-50 mm - liquid gel</td>
<td>1,200 pcs.</td>
</tr>
<tr>
<td>33367</td>
<td>Adaptors to connect ECG cable to code 33325/6/7</td>
<td>10 pcs.</td>
</tr>
<tr>
<td>33341</td>
<td>Disposable pre-gelled tab electrodes 34x22 mm</td>
<td>100 pcs.</td>
</tr>
<tr>
<td>33375</td>
<td>Adapter for ECG cables (pin)</td>
<td>10 pcs.</td>
</tr>
<tr>
<td>33376</td>
<td>Adaptors for ECG cables with 4 mm banana plug</td>
<td>10 pcs.</td>
</tr>
<tr>
<td></td>
<td>To be used with GIMAPLAY and CARDIOGIMA ECG Universal adapter with 4 mm socket for snap and alligator connection</td>
<td></td>
</tr>
</tbody>
</table>

3M RED DOT™ ELECTRODES

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>ECG, MONITORS &amp; ULTRASOUND</th>
<th>Minimum order</th>
</tr>
</thead>
<tbody>
<tr>
<td>33378</td>
<td>3M Red Dot™ 2330 - 3.2 x 2.2 cm single use electrode with adhesive gel</td>
<td>100 pcs.</td>
</tr>
<tr>
<td>33297</td>
<td>3M Red Dot™ 2239 - Ø 6 mm - 20 bags box of 50 pcs</td>
<td>1,000 pcs.</td>
</tr>
</tbody>
</table>

ALKALINE, LITHIUM AND ZINC-AIR "ACOUSTIC" BATTERIES

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>ECG, MONITORS &amp; ULTRASOUND</th>
<th>Minimum order</th>
</tr>
</thead>
<tbody>
<tr>
<td>32210</td>
<td>Varta 2016 - lithium button</td>
<td>1 pc.</td>
</tr>
<tr>
<td>32211</td>
<td>Varta 2025 - lithium button</td>
<td>1 pc.</td>
</tr>
<tr>
<td>32212</td>
<td>Varta 2032 - lithium button</td>
<td>1 pc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>ECG, MONITORS &amp; ULTRASOUND</th>
<th>Minimum order</th>
</tr>
</thead>
<tbody>
<tr>
<td>32220</td>
<td>Rayovac 675 - zinc air - acoustic</td>
<td>6 pcs.</td>
</tr>
<tr>
<td>32221</td>
<td>Rayovac 13 - zinc air - acoustic</td>
<td>6 pcs.</td>
</tr>
<tr>
<td>32222</td>
<td>Rayovac 312 - zinc air - acoustic</td>
<td>6 pcs.</td>
</tr>
<tr>
<td>32223</td>
<td>Rayovac 10 - zinc air - acoustic</td>
<td>6 pcs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>ECG, MONITORS &amp; ULTRASOUND</th>
<th>Minimum order</th>
</tr>
</thead>
<tbody>
<tr>
<td>32235</td>
<td>Varta ministilo H.E. - alkaline</td>
<td>4 pcs.</td>
</tr>
<tr>
<td>32236</td>
<td>Varta stilo H.E. - alkaline</td>
<td>2 pcs.</td>
</tr>
<tr>
<td>32237</td>
<td>Varta half torch H.E. - alkaline</td>
<td>2 pcs.</td>
</tr>
<tr>
<td>32238</td>
<td>Varta torch H.E. - alkaline</td>
<td>1 pc.</td>
</tr>
<tr>
<td>32239</td>
<td>Varta 9V H.E. - alkaline</td>
<td>10 blisters</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>ECG, MONITORS &amp; ULTRASOUND</th>
<th>Minimum order</th>
</tr>
</thead>
<tbody>
<tr>
<td>32240</td>
<td>Varta ministilo 1000 mAh</td>
<td>2 pcs.</td>
</tr>
<tr>
<td>32241</td>
<td>Varta stilo 2500 mAh</td>
<td>4 pcs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>ECG, MONITORS &amp; ULTRASOUND</th>
<th>Minimum order</th>
</tr>
</thead>
<tbody>
<tr>
<td>32242</td>
<td>Rechargeable battery</td>
<td>10 blisters</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>ECG, MONITORS &amp; ULTRASOUND</th>
<th>Minimum order</th>
</tr>
</thead>
<tbody>
<tr>
<td>32241</td>
<td>Universal charger</td>
<td>100 - 240 V</td>
</tr>
<tr>
<td>32242</td>
<td>LCD charger</td>
<td>110 - 240 V</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>ECG, MONITORS &amp; ULTRASOUND</th>
<th>Minimum order</th>
</tr>
</thead>
<tbody>
<tr>
<td>32236</td>
<td>12V + USB adaptor</td>
<td>4AA yes</td>
</tr>
</tbody>
</table>

For use with GIMA Play and Cardiogima ECG Conform to EN 60601-2-25
**GIMA ULTRASOUND GEL**

Hypoallergenic gel suitable for all kind of ultrasonography and doppler applications. It ensures the ultrasound waves come to the equipment display in a clear and uninterrupted way.

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>ULTRASOUND GEL</th>
<th>minimum order</th>
</tr>
</thead>
<tbody>
<tr>
<td>33269</td>
<td>Sterile ultrasound gel - sachet - 20ml - transparent</td>
<td>box of 48</td>
</tr>
<tr>
<td>33271</td>
<td>Ultrasound gel - sachet - 20ml - transparent</td>
<td>box of 200</td>
</tr>
<tr>
<td>33272</td>
<td>Ultrasound gel - tube 250ml - blue</td>
<td>box of 40</td>
</tr>
<tr>
<td>33273</td>
<td>Ultrasound gel - tube 250ml - transparent</td>
<td>box of 40</td>
</tr>
<tr>
<td>33274</td>
<td>Ultrasound gel - bottle 1 l - blue</td>
<td>box of 12</td>
</tr>
<tr>
<td>33275</td>
<td>Ultrasound gel - bottle 1 l - transparent</td>
<td>box of 12</td>
</tr>
<tr>
<td>33276</td>
<td>Ultrasound gel - tank 5 l - blue</td>
<td>box of 2*</td>
</tr>
<tr>
<td>33277</td>
<td>Ultrasound gel - tank 5 l - transparent</td>
<td>box of 2*</td>
</tr>
<tr>
<td>33278</td>
<td>Ultrasound gel - bag 5 l - blue</td>
<td>box of 4**</td>
</tr>
<tr>
<td>33279</td>
<td>Ultrasound gel - bag 5 l - transparent</td>
<td>box of 4**</td>
</tr>
<tr>
<td>33280</td>
<td>Pump for bag 5l</td>
<td></td>
</tr>
<tr>
<td>33283</td>
<td>Pump for tank 5l</td>
<td></td>
</tr>
</tbody>
</table>

*Includes 2 empty bottles 250 ml  ** includes 4 empty bottles 250 ml

**GEL CLEANING DEVICES**

- **33281 PROBE CLEANING SOLUTION 250 ml**
  It removes the gel left over the probe, makes the image clearer and extends the probe life. Thanks to the active agents contained, it prevents the bacteria to pass from patient to patient, and it ensures hygiene.

- **33282 GEL CLEANING WIPES bottle of 70 wipes**
  Wet wipes specifically designed to remove ultrasound gel from patient body leaving it clean and dry.

**EEG PASTE**

- **33262 EEG PASTE - 400 g**
  Used beneath EEG electrodes in EEG for brain mapping. Thanks to the active substances in its content, it allows the electrode to cling to the strand of hair easily and provides conductivity. It is hypoallergenic, does not irritate skin, soluble in water and can be cleaned easily. Does not contain oil and oily substances. It has no toxic effects and odour.

**ECG GEL AND SPRAY**

- **33266 ECG GEL - 250 ml - box of 40 tubes**
- **33263 ECG GEL - 5 l - box of 4 bags**
- **33268 ECG SPRAY GEL - 250 ml - box of 20 tubes**
  Suitable for non pre-gelled electrodes, ECG latches and pendant switches in any ECG and exertional applications. Allows ECG waves clear transfer to equipment. It is hypoallergenic, does not irritate skin, does not contain oil and oily substances, does not contain formaldehyde and salt, has no toxic effects and is odourless.
**STEREODOP - PROFESSIONAL VASCULAR SYSTEM**

- **33235 STEREODOP with 2 pencil probes: 4 and 8 MHz**
  This is a continuous wave (CW) bidirectional stereo doppler with high resolution printer, large LCD display and rechargeable batteries that provide a doppler signal of high quality.

**Main features**

- Real time high resolution thermal printer. With 3 speeds: 5, 12.5, 25 mm/s, 384 dots on 58 mm thermal paper.
- High resolution backlit LCD graphic display. 320x240 dots, 1/4 VGA. Selectable zero line position. Inversion of graph and scale.
- Mode selection: bidirectional or separate.
- Display speeds: 5, 12.5, 25 mm/s. Double printer control.
- Hi-Fi stereo audio amplifier. Acoustic power: 5 + 5 watt.
- Venous filter selection. Bandwidth: 20 Hz to 12 KHz.
- Automatic gain control (AGC) and digital volume regulation.
- Double footswitch: for freezing (the right) and for printing (the left).
- Microprocessor controlled system. Memory of last 90 sec.

The post processing system allows the flow of graph to change the scale, the zero line positioning, the speed, to make the inversion, to select the mode and to insert or to include or exclude the following calculations: peak systole, end diastole, mean velocity, pulsatility index, resistivity index and heart rate.

- **33237 STEREODOP PROBE 4 MHz**
- **33238 STEREODOP PROBE 8 MHz**
- **33250 THERMAL PAPER 57 mm x 25 m (pack of 5 rolls)**

---

**GIMA PORTABLE, BIDIRECTIONAL, VASCULAR DOPPLER**

- **33230 GIMA BIDIRECTIONAL DOPPLER NON STEREO with two probes: 4 and 8 MHz.**
  Continuous wave (CW) bidirectional doppler equipped with electronic probes for high sensitivity and low background noise.
  - Bidirectional graphic separation of flow (forward and reverse)
  - LCD graphic display for real time display of forward and reverse flow in bidirectional or separate mode
  - Selectable amplitude scale: 1, 2, 4, 8 kHz. during the test and before printing. Preset zero line.
  - 5 minutes (300 sec.) continuous and reviewable memorized test. Operator can select the most meaningful exam and print it.
  - Calculation of: heart rate, peak flow and mean flow.
  - Simultaneous connection of high sensitivity probes
  - Internal rechargeable large capacity battery (Ni-Cd 1.8 Ah);
    the system can be operated during charging. Autonomy 8 hours use or 1 hour print.
  - Footswitch for freezing or memorizing the graphs
  - Hardcopy may or may not include the parameter calculation
  - Printing time scale: 25 mm/s.
  - Hi-fi audio output for correct acoustic diagnosis

- **33240 GIMA BIDIRECTIONAL PROBE 4 MHz - spare for 33230**
- **33241 GIMA BIDIRECTIONAL PROBE 8 MHz - spare for 33230**
- **33250 THERMAL PAPER 58 mm x 25m (pack of 5 rolls)**

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**POCKET DOPPLER with interchangeable or fixed probes**

- **33120 GIMA POCKET DOPPLER with output level controlled by rotary volume control**

**GIMA POCKET DOPPLERS**

Small, lightweight, high sensitivity pocket Doppler. Its probes are ideal for use by a General Practitioner, vascular specialist for routine vascular examination in ER for vessel location, or by specialists in diabetes, urology and gynaecology. Vascular flow signals and FHR are easily located using the transducer while internal signal processing minimises noise artefacts. The flow signal is also available to the user via the built-in loudspeaker with output level controlled by rotary volume control.

**TOP QUALITY: MADE IN UK**

**TECHNICAL SPECIFICATIONS**

- **Output**
  - Headset: Audio output to optional headset (not included)
  - Material: ABS / Noryl
  - Size: 150 mm by 75 mm
  - Weight: 299 g (with transducer)
  - Warranty: 1 year - Made in UK

- **Ultrasound**
  - Frequency: 2, 5 or 8 MHz continuous wave
  - Transducer: 2 crystal narrow beam
  - Output power: <15mW/cm² SATA
  - Audio Response: 300Hz - 4 KHz

- **Unit Controls**
  - Keys: 1 Key (for unit on/off)
  - Controls: rotary volume

- **Indicators**
  - Yellow battery low LED

- **Power supply**
  - Battery 9V Alkaline (not included)
  - Expected battery life: >9 hours

- **Size: 28 x 30 x 13 cm**
- **Weight: 2.5 kg**

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**STANDARD ACCESSORIES**

- 2 electronic pencil probes: 4 and 8 MHz.
- Battery charge
- Footswitch
- Carrying case
- Manual (English, Italian, French)
- Gel bottle 50 g
- Thermal paper roll 30 m
- 2 electronic pencil probes: 4 and 8 MHz
- Footswitch
- Carrying case
- Manual (English, Italian, French)
- Gel bottle 50 g
- Thermal paper roll 30 m
ECG, MONITORS & ULTRASOUND

CHISON IVIS 60 EXPERT ECOCOLOURDOPPLER + 4D

- 33940 ECOCOLOURDOPPLER - 15" flat high resolution monitor
  Supplied with 3 probe connectors, trolley, keyboard, without probes, with
  large image storage: 160GB Hard Disk, 2 port USB, DVD-RW, VGA format
Digital colour Doppler System with professional features:
  Imaging mode:
  - B, 2B, 4B, B/M
  - CFM, B/BC
  - PW mode, HPRF
  - Power doppler / Directional PD
  - Instant triplex, duplex
  - Chroma B/PW/CW
Image processing technology:
  - THI on all probes
  - Speckle reduction algorithm (SRA)
  - Multiple compound imaging (MCI)
Wideband multifrequency probes
Continuously adjustable, 2-13 MHz
Operating voltage: 110-230V 50-60 Hz
- 33941 ECOCOLOURDOPPLER + 4D PROBE
  AND PACKAGE
Same as code 33940 but with 4D real time imaging composed of 3D pictures with
the addition of live motion and probe 4D convex (33949).
- 33942 CARDIAC PACKAGE
  (colour M, CW, steering M, ECG)
• 33943 I-IMAGE to improve image quality
• 33989 MITSUBISHI CP30W COLOUR VIDEO PRINTER 423 dpi
• 33993 SONY UP-25 MD COLOUR PRINTER

CHISON Q5 PORTABLE COLOURDOPPLER

- 33950 CHISON Q5 COLOURDOPPLER with 2 probe connector, 15" high resolution monitor, 80GB hardisk, 2 USB port, VGA port, without probe.
Portable digital colour doppler with high professional features:
  Imaging mode:
  - B, 2B, 4B, B/M
  - B/BC, CFM - TSS
  - PW, HPRF, CW
  - PD, directional PD
  - Instant triplex, duplex
  - Chroma B/M/PW/CW
Image processing technology:
  - Double phase digital beam forming (DPDBF)
  - THI on all probes
  - Speckle reduction algorithm (SRA)
  - Multiple compound imaging (MCI)
  - Operating voltage: 110-230V, 50-60 Hz
• 33942 CARDIAC PACKAGE for Q5 - to be ordered
  with colour doppler
• 33951 CHISON Q8 COLOURDOPPLER
Same as Q5 but with 4D real time imaging, 160Gb hardisk, cardiac package
• 33901 TROLLEY FOR Q5 AND Q8
• 33943 I-IMAGE for improving image quality
DIGITAL PORTABLE ULTRASOUND

- 33900 DIGITAL PORTABLE ULTRASOUND 8300 supplied with 10" SVGA monitor, 2 probes connectors, CINE memory, 2 USB ports, software packages. Without probes.

Professional portable ecoograph with wide range of probes and high quality of images suitable in many specialist fields.

Image:
- B, B/B, 48, B/M
- Harmonic imaging
- 256 gray scales
- Scanning depth: max 240 mm (depending on probe)

Probes: supplied with 2 probe connectors
- Selection of 5 probes: Electronic Convex / Linear / Transvaginal / Transrectal / Cardiac
- Wideband multi-frequency 2-9 MHz

Image processing:
- Fully digital beamforming technology
- Real-time dynamic imaging: RDF, RDA, DFS, DRA
- Frame averaging: 8 steps
- Linear averaging: 8 steps
- 6 STC slides for near far and overall gain control
- Image reversing: left/right, up/down
- Zoom: intelligent zoom, 4 steps

Measurement and report
- 8 mode: Distance, circumference, area, volume, ratio, angle, %stenosis, histogram, profile
- Cardiology package: LV, mitral and aortic valve, CO, LVET, MVI, SV, EF, cardiac index
- Software package: Abdomen, OB/GYN, Cardiac, Urology
- M mode: distance, time, velocity, heart rate
- EDD tables, gestational age: BPD, GS, CR, FL, HC, AC
- Fetal weight, fetal heart measurement, growth analysis, LMP, BBT
- Others
  - CINE: 128 frames, play back selectable
  - 10 inch, SVGA high resolution monitor
  - Image permanent storage: hard disk, USB (2 ports)
  - can use PC printer (A4) or video printer
  - operating voltage: 110-230V, 50-60 Hz
  - can use any other printer for ecoograph on the market

33930 CHISON 600M PORTABLE ULTRASOUND - NEW VERSION

- 33930 CHISON 600M PORTABLE ULTRASOUND 10" SVGA monitor with two probe connectors, 256 frames cine memory, USB port without probes
- Zooming and measurement functions (max scanning depth: 252 mm)
- Wide applications: GYN, urology, abdominal, small parts
- Easy to use, just one day to learn all functions
- 4-steps zoom with depth control: x0.8, x1.0, x1.5, x2.0
- Various measurements: Distance, Circumference, Area, Volume
- Full Ob/Gyn software included: 7 EDD tables (BPD, GS, FL, AD, HC, AC, CR), G.A. (fetal age) from 4-43 weeks
- Fetal weight, fetal heart rate measurement
- Imaging reversing: up/down, left/right, positive/negative
- Power supply: 110-230V, 50-60 Hz

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- Fetal weight, fetal heart rate measurement
- Imaging reversing: up/down, left/right, positive/negative
- Power supply: 110-230V, 50-60 Hz
**GIMA VITAL SIGNS MONITORS**

“Vital Signs” is a line of small multi-parameter patient monitors, which can monitor the vital physiological parameters: non-invasive blood pressure (NIBP), pulse oxygen saturation (SpO₂), electrocardiogram (ECG), temperature (TEMP) and capnography (EtCO₂).

**Features:**
- Small size, clear and bright display for remote view
- Up to 400 groups of NIBP measurements can be stored and listed
- Up to 90 hours of EtCO₂, SpO₂, and HR trend curve can be displayed
- Built-in rechargeable battery
- Optional built-in thermal printer

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>MONITOR</th>
<th>SpO₂</th>
<th>NIBP</th>
<th>ECG</th>
<th>CO₂</th>
<th>TEMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>35120</td>
<td>VITAL-S</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>35121</td>
<td>VITAL-SNT</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>35122</td>
<td>VITAL-SNET</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>35123</td>
<td>VITAL-C</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>35125</td>
<td>Printer - optional</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>35126</td>
<td>Battery - spare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35135</td>
<td>Adult SpO₂ probe - spare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35136</td>
<td>Pediatric SpO₂ probe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35137</td>
<td>ECG cable - spare</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35139</td>
<td>NIBP cuff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35127</td>
<td>Trolley</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35128</td>
<td>Rail clamp</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TECHNICAL SPECIFICATIONS**

- **ECG and TEMP**
  - Heart rate range: 20bpm ~ 300bpm
  - TEMP measurement range: 25°C ~ 45°C
  - Accuracy: ±2bpm or 1% whichever is greater (ECG) ±0.2°C (TEMP)

- **CO₂**
  - Technology: Infrared absorption method
  - Sampling Mode: Sidestream or Mainstream
  - CO₂ Response Time: Sidestream: <3 seconds
  - Mainstream: <60ms (rise time)

- **Power**
  - AC power supply voltage: 100 ~ 250V AC
  - AC power frequency: 50/60 Hz
  - International power supply: 12V DC (rechargeable)

- **Battery specification:** 12V 2.3AH (sealed lead-acid battery)

**SENSORS COMPATIBLE WITH BCI, NELLCOR, COMDEK**

<table>
<thead>
<tr>
<th>Sensor Picture</th>
<th>Socket Picture</th>
<th>GIMA code</th>
<th>Description</th>
<th>Recommended use</th>
<th>Patient range</th>
<th>Preferred application</th>
<th>Cable length</th>
<th>Min. order</th>
<th>To be used with GIMA codes</th>
<th>Compatible with</th>
</tr>
</thead>
<tbody>
<tr>
<td>34296</td>
<td></td>
<td>35120</td>
<td>Infant probe</td>
<td>Disposable</td>
<td>under 3 kg</td>
<td>hand or foot</td>
<td>55 cm</td>
<td>1 pc.</td>
<td>34286, 34290, 34291, 33702</td>
<td>BCI - Comdek</td>
</tr>
<tr>
<td></td>
<td></td>
<td>35121</td>
<td>Infant probe</td>
<td>Disposable</td>
<td>3-15 kg</td>
<td>finger or toe</td>
<td>55 cm</td>
<td>1 pc.</td>
<td>34286, 34290, 34291, 33702</td>
<td>BCI - Comdek</td>
</tr>
<tr>
<td>34297</td>
<td></td>
<td>35122</td>
<td>Child probe</td>
<td>Disposable</td>
<td>15-45 kg</td>
<td>finger or toe</td>
<td>55 cm</td>
<td>1 pc.</td>
<td>34286, 34290, 34291, 33702</td>
<td>BCI - Comdek</td>
</tr>
<tr>
<td>34298</td>
<td></td>
<td>35135</td>
<td>Adult probe</td>
<td>Disposable</td>
<td>over 40 kg</td>
<td>finger or toe</td>
<td>55 cm</td>
<td>1 pc.</td>
<td>34286, 34290, 34291, 33702</td>
<td>BCI - Comdek</td>
</tr>
<tr>
<td>34300</td>
<td></td>
<td>35126</td>
<td>Adult probe</td>
<td>Reusable</td>
<td>over 40 kg</td>
<td>finger</td>
<td>145 cm</td>
<td>1 pc.</td>
<td>34286, 34290, 34291, 33702</td>
<td>Comdek</td>
</tr>
<tr>
<td></td>
<td></td>
<td>35127</td>
<td>Extention cable</td>
<td>Reusable</td>
<td>over 15 kg</td>
<td>finger</td>
<td>150 cm</td>
<td>1 pc.</td>
<td>34281, 33290, 33291</td>
<td>BCI - Comdek</td>
</tr>
<tr>
<td>34288</td>
<td></td>
<td>35136</td>
<td>Extention cable</td>
<td>Reusable</td>
<td>over 40 kg</td>
<td>finger</td>
<td>150 cm</td>
<td>1 pc.</td>
<td>33280, 33281</td>
<td>Bionics (BPM-300 only)</td>
</tr>
<tr>
<td>33288</td>
<td></td>
<td>33708</td>
<td>Vet probe</td>
<td>Reusable</td>
<td>VET tongue</td>
<td>145 cm</td>
<td>1 pc.</td>
<td>33703</td>
<td>BCI - Comdek</td>
<td>Bionics</td>
</tr>
</tbody>
</table>
### BM3 & BM5 MONITOR ACCESSORIES

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>ACCESSORIES FOR BM3 AND BM5</th>
</tr>
</thead>
<tbody>
<tr>
<td>33738</td>
<td>NIBP Extension cable, 3 m (necessary for all cuffs)</td>
</tr>
<tr>
<td>33735</td>
<td>Adult cuff - 49x15 cm - need ext. cable 33738</td>
</tr>
<tr>
<td>33736</td>
<td>Child cuff - 35x11 cm - need ext. cable 33738</td>
</tr>
<tr>
<td>32848</td>
<td>Obese cuff 62x75.5 - need ext. cable 33738</td>
</tr>
<tr>
<td>33737</td>
<td>Kit of 3 neonatal cuffs - needs cable 33738</td>
</tr>
<tr>
<td>32810</td>
<td>Mini cuff 16x5 cm - needs 33738+33739</td>
</tr>
<tr>
<td>32811</td>
<td>Mini cuff 23x5 cm - needs 33738+33739</td>
</tr>
<tr>
<td>33739</td>
<td>Metal connector (necessary for mini cuff)</td>
</tr>
<tr>
<td>33740</td>
<td>Temp Temperature sensor exacon 2.75 m, skin type</td>
</tr>
<tr>
<td>33741</td>
<td>Temperature rectal sensor</td>
</tr>
<tr>
<td>33743</td>
<td>Paper Thermal paper 57.5 mm, 38 Ø</td>
</tr>
<tr>
<td>33742</td>
<td>Battery Ni-MH 12V battery - up to january 2006** - BM3, BM3 Plus</td>
</tr>
<tr>
<td>33745</td>
<td>Ni-MH 12V battery - Since january 2006** - BM3, BM3 Plus</td>
</tr>
<tr>
<td>33746</td>
<td>Li-ion battery - Since sept. 2007** - new BM3, BM3 Plus, BM5</td>
</tr>
<tr>
<td>33747</td>
<td>Li-ion battery 11.1 V - 6 cell for EtCO2 - for 33782 only</td>
</tr>
<tr>
<td>33748</td>
<td>Adapter AC adapter</td>
</tr>
<tr>
<td>33749</td>
<td>Jack Direct vehicle cigar jack (12 V dc)</td>
</tr>
</tbody>
</table>

** Date is approximative. Please select battery on the base of picture and specifications.

### BM3 & BM5 SpO₂ SENSORS - NELLCOR COMPATIBLE

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>ACCESSORIES FOR BM3 AND BM5</th>
</tr>
</thead>
<tbody>
<tr>
<td>33733</td>
<td>SpO₂ Extension cable*, 2 m (7 pin small SpO₂ connector) up to 2005</td>
</tr>
<tr>
<td>33734</td>
<td>Extension cable*, 2 m (6 pin SpO₂ connector) sold in 2005/6/7</td>
</tr>
<tr>
<td>33716</td>
<td>Extension cable*, 2 m (7 pin big SpO₂ connector) since 2007</td>
</tr>
<tr>
<td>33730</td>
<td>Adult reusable finger probe (&gt; 45 kg) Nellcor comp.</td>
</tr>
<tr>
<td>33731</td>
<td>Pediatric reusable finger probe (15-45 kg) - Nellcor comp.</td>
</tr>
<tr>
<td>33732</td>
<td>Disposable infant probe - under 3 kg - Nellcor comp.</td>
</tr>
<tr>
<td>33755</td>
<td>Disposable child probe - 3-15 kg - Nellcor comp.</td>
</tr>
<tr>
<td>33756</td>
<td>Disposable pediatric probe - 15-45 kg - Nellcor comp.</td>
</tr>
<tr>
<td>33757</td>
<td>* Necessary for all probes. Please select correct one</td>
</tr>
<tr>
<td></td>
<td>** All probes are suitable also for OXY-9</td>
</tr>
</tbody>
</table>

### ECG CABLES FOR MONITORS

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>ACCESSORIES FOR CODES 33718, 33719, 33720, 33721, 33722, 33723, 33724, 33780, 33781</th>
</tr>
</thead>
<tbody>
<tr>
<td>33711</td>
<td>3-lead patient cable kit (cable+snap connectors 33748)</td>
</tr>
<tr>
<td>33712</td>
<td>5-lead patient cable kit (cable+snap connectors 33749)</td>
</tr>
<tr>
<td>33726</td>
<td>3-lead patient cable kit (cable+snap connectors 33750)</td>
</tr>
<tr>
<td>33727</td>
<td>5-lead patient cable kit (cable+3 clip connectors)</td>
</tr>
<tr>
<td>33731</td>
<td>3-lead veterinary cable kit (cable+3 clips connects)</td>
</tr>
<tr>
<td>33748</td>
<td>3-lead snap connectors for 33711 - spare - new</td>
</tr>
<tr>
<td>33749</td>
<td>5-lead snap connectors for 33712 - spare - new</td>
</tr>
<tr>
<td>33750</td>
<td>3-lead snap type connectors for 33726 - spare - old</td>
</tr>
<tr>
<td>33751</td>
<td>5-lead snap type connectors for 33728 - spare - old</td>
</tr>
<tr>
<td>33752</td>
<td>Vet 3-lead clip type connectors for 33726-7 - spare - old</td>
</tr>
<tr>
<td>33753</td>
<td>Vet 5-lead clip type connectors for 33728 - spare - old</td>
</tr>
<tr>
<td>33760</td>
<td>Vet 3-lead clip type connectors for 33713 - spare - new</td>
</tr>
<tr>
<td>33761</td>
<td>Vet 5-lead clip type connectors for 33712 - spare - new</td>
</tr>
<tr>
<td>33762</td>
<td>3-lead patient cable</td>
</tr>
<tr>
<td>33763</td>
<td>5-lead patient cable</td>
</tr>
</tbody>
</table>

### ECG CABLES FOR CODES 33777, 33778, 33779

<table>
<thead>
<tr>
<th>GIMA code</th>
<th>ACCESSORIES FOR CODES 33777, 33778, 33779</th>
</tr>
</thead>
<tbody>
<tr>
<td>33764</td>
<td>3-lead patient cable kit (cable + snap connector)</td>
</tr>
<tr>
<td>33765</td>
<td>10-lead patient cable kit (cable + snap connector)</td>
</tr>
<tr>
<td>33766</td>
<td>3-lead veterinary cable kit (cable + clip connector)</td>
</tr>
</tbody>
</table>
COLOUR MULTIPARAMETER MONITORS

- 33718 GIMA BM3 MONITOR (7” - 800X480 - TFT display)
- 33719 GIMA BM3 VET MONITOR - VETERINARY

ECG+SpO2+NIBP+RESP+TEMPERATURE

GIMA monitors are configured with:
- Heart/pulse rate
- ST analysis, PVC count display
- 3 lead ECG (5 lead optional)
- Non-invasive blood pressure (NIBP)
- Nellcor Pulse oximetry (SpO2) - pitch tone
- Impedance respiration
- Temperature (sensor is optional)
- Pacemaker detection indicated on ECG display
- Battery and direct DC (18 VDC) input (not for recharge)
- Built-in printer (58 mm)
- 120 hours memory trend capacity
- Remote alarm function
- 20 alarm memory
- wired or wireless LAN and HL7
- Internal software selectable in GB, DE, FR, IT, PT, PL, RO, HU, ES, CZ, BG, RU, TR, CN
- User manual: English (on request: Italian, Spanish, French, German).

- 33725 CART Adjustable height, basket included

See temperature sensors, cuffs, batteries and other accessories at page 190.

STANDARD ACCESSORIES

- 33718
- 33719
- 3 lead patient cable (ECG)
- Disposable electrodes: 10 pcs
- NIBP tubing - 3m
- Reusable adult cuff 25-35 cm
- Reusable child cuff
- Set of 3 veterinary cuff
- SpO2 sensor - reusable
- SpO2 sensor extension cable 2 m
- Thermal printer 58 mm
- DC adaptor (18 VDC, 2.5A)
- Battery
- User manual: English, Italian

TECHNICAL SPECIFICATIONS

GENERAL

Display: 7” colour TFT (800x480)
Dimensions/Weight: 238x250xh 163 mm/3.1 kg
Indicators: Up to 4 waves (2xECG, SpO2, Respiration), categorized alarms (3 priority levels), external power LED, heart rate tone, battery status
Thermal printer: 25, 50 mm/sec (paper width 58 mm)
Battery: internal battery: Li-ion
Interfaces: Up to 4 waves (2xECG, SpO2, Respiration), categorized alarms (3 priority levels), external power LED, heart rate tone, battery status
Thermal printer: 25, 50 mm/sec (paper width 58 mm)
Battery: internal battery: Li-ion
Operating voltage: 100-240 V, 50-60 Hz
ECG
Leads: 3 leads, 5 leads(OPTION)
Heart Rate Range: 30 to 300 bpm
Heart Rate Accuracy: ± 3 bpm
ST level: yes
PVC Count display: yes
Bandwidth: 0.5 Hz to 40Hz
Display Sweep Speeds: 25mm/sec
ECG Size (Sensitivity): 0.5, 1, 2, 4 mV/cm
Pacemaker Detection Mode: Indicator on waveform display
CMRR: >90 dB at 50 or 60Hz
Input Dynamic Range: ± 5 mVAC, ± 300 mVDC
Defibrillator Discharge: <4 s
Arrhythmia analysis: VTAC/VFIB/ ASYSTOLIC
Lead-Off Detection with display indicator
SpO2
% Saturation Range: 0% to 100%
Pulse Rate Range: 0 to 254 bpm
SpO2 Accuracy: 70% to 100% ±2 digits
Pulse Rate Accuracy: ± 2 bpm
NIBP
Technique: Oscillometric
Measurement Modes: Manual: Single measurement
Auto: Automatic intervals of 1, 2, 3, 4, 5, 10, 15, 20, 30 min. and 1, 2, 4, 8 hours
Stat: Continuous measurement for 5 minutes
Cuff pressure display: 50 to 300 mmHg
B.P. measurement range: Systolic: 0 to 260 mmHg
Mean Arterial Pressure: 30 to 220 mmHg
Diastolic: 20 to 200 mmHg
Adjustable Cuff Inflation Pressure
Respirations
Range: 5 to 120 breaths/min
Accuracy: ± 3 breaths/min
Temperature Unit
Range: 15° to 45°C (59°F to 113°F)
Accuracy: ± 0.1°C
Compatible with: YSI Series 400 Temperature Probes

PATIENT CENTRAL SYSTEM (up to 31 monitors)

It allows the user to monitor and extract the exact status of several patients simultaneously at a place. Convenient bidirectional communication allows you to admit new patient information, set alarms at either central station or patient monitor.

- 33745 WIRE CENTRAL SYSTEM
- 33746 WIRE CONNECTION KIT
One for any monitor to be connected.

- 33758 WIRELESS CENTRAL SYSTEM
- 33759 WIRELESS CONNECTION KIT
One for any monitor to be connected.
**BM5 MULTIPARAMETER MONITOR WITH EXTENDIBLE PARAMETERS**

- SpO2 pitch tone
- Selectable software language (GB, DE, FR, IT, PT, PL, RO, HU, ES, CZ, BG, RU, TR, CN)
- Connection to central monitoring system
- Li-ion battery with long life time
- Direct DC input for vehicle transport
- 120 full hours trend data stored
- LAN or wireless LAN
- Graphical and tabular trends of printing
- 58mm built-in chart recorder
- 33714  GIMA BM1 MONITOR SpO2+NIBP
- Standard accessories as BM3 monitor, see page 191, but with 10 leads ECG cable (33778 only).

**TECHNICAL SPECIFICATIONS FOR MONITOR 33777 - 33778 - 33780 - 33781**

**General**
- Dimensions/Weight: 270x185x90 mm/4 kg
- Lead type: 3-lead, 5-lead (33777/79/80/81), 10-lead (33779 only)
- ECG Wavelengths: 3-lead channel (33777/80/81 only)
- 5-lead channel (33777/80/81 only)
- Cuff pressure display range: 0 to 120 mmHg
- B.P. measurement range: 0 to 300 mmHg
- Pulse rate counting range: 0 to 300 beats/min
- Measuring accuracy: ±1 mmHg (<100 mmHg)

**Respirations**
- Measuring range: 2~150 bpm
- Measure mode: 0~200 mmHg
- Accuracy: ± 1 bpm or ±1% of reading, whichever is greater

**Temperature Unit**
- Measurement mode: Sidestream
- Transducer sensitivity: 0.1°C
- Accuracy: ±0.1°C

**EtCO2**
- Transducer sensitivity: 5μV/V mmHg
- Accuracy: ±1 mmHg
- Measuring mode: Diagnostic analysis
- Respiration range: 0 to 30 breaths/min
- Accuracy: ±1 breath/min

**IBP**
- Measurement mode: Oscillometric with linear deflation
- Technique: ASYSTOLIC Pacemaker detection
- Accuracy: ±1 mmHg (≤100 mmHg)
- Measuring accuracy: ±1 mmHg (≤100 mmHg)
- Drift ≤1 mmHg over 24 hours

**GIMA code**
- TEMPERATURE, ETCO2, and IBP KIT

**BM1: SLIM AND LIGHT MONITOR WITH STRONG MOBILITY**

- SpO2, TEMP, EtCO2, NIBP technical specifications same as BM5.
- SpO2, TEMP, EtCO2, NIBP technical specifications same as BM5.