

Infinity[®] Gamma XL Patient Monitor

Designed to support low- to mid-acuity patients, the Infinity Gamma XL patient monitor provides a full set of the most commonly used parameters – including ECG, arrhythmia analysis, respiration, SpO₂, pulse rate, temperature, and noninvasive and invasive blood pressure.



MT-2054-2003

Patented Pick and Go[®] technology enables these monitors to provide continuous surveillance, while eliminating the need to purchase separate transport monitors.

The Gamma XL monitor has a compact, user-friendly design. Seamless wired or wireless networking capabilities let you share and receive patient information for better-informed decisions.

FEATURES

- Provide monitoring versatility for any sub-acute care setting
- With Pick and Go, the need of separate monitors is eliminated.
- Works as a standalone patient monitor or connects to Infinity Network via Infinity Docking Station or wireless adapter for seamless wired to wireless networking
- Scales using software options

Monitoring Capabilities

Neonatal, pediatric and adult applications

TECHNICAL DATA

SUPPORTED PARAMETERS

ECG

| | |
|------------------------------|---|
| Available leads | 3-lead set, Leads: I, II, III 5-lead set, Leads: I, II, III, aVR, aVL, aVF, V 6-lead set, Leads: I, II, III, aVR, aVL, aVF, V, V+ |
| Measuring range | 15 to 300 bpm |
| Accuracy | ± 5 bpm or ± 2% (whichever is greater) |
| Frequency range (±3 db) | 0.5 Hz to 28 Hz (50 Hz) 0.5 Hz to 40 Hz (60 Hz) |
| Mains filter or Notch filter | 50 or 60 Hz |



MT-8648-2006

Infinity Gamma XL

Scalable patient monitor that doubles as a transport monitor.

CONTINUING TECHNICAL DATA**QRS Detection Range**

| | |
|-----------------------------------|---|
| QRS detection | Amplitude: 0.5 - 5.0 mV Duration: 70 - 120 ms (Adult and Pediatric), 40 - 120 ms (Neonatal) |
| Alarms | User-selectable upper and lower limits |
| Pacer detection (adult/pediatric) | Leads: I, II or III Amplitude: ± 5 to ± 700 mV Width (d _r): 0.2 to 2.0 msec |
| Accessories | 3-, 5- or 6-lead electrode set |

ST Analysis (not intended for neonates)

| | |
|---------------------------|---|
| Available leads | With 2-lead ST option: Choice of any 2 available leads |
| Default leads | II, V (if used with MultiMed® 5 or 6 lead) |
| ECG complex length | 900 msec |
| Units of measure | mm (default) or mV |
| Minimum number of beats | One required in updated interval |
| Resolution | ± 0.1 mm/ ± 0.01 mV |
| Accuracy | $< \pm 1$ mm/ ± 0.1 mV (RTI – referred to input) |
| Upper and lower ST alarms | -15.0 mm to +15.0 mm in 0.1 mm increments -1.50 mV to +1.50 mV in 0.01 mV increments |

Isoelectric measurement point

| | |
|------------------|--|
| Adjustment range | Start of ECG complex to fiducial point |
| Default | QRS onset - 28 msec |

ST measurement point

| | |
|------------------|--------------------------------------|
| Adjustment range | Fiducial point to end of ECG complex |
| Default | QRS offset + 80 msec |

Arrhythmia Detection

| | |
|-----------------------|---|
| Adult and Pediatric | Yes |
| Neonatal | No, only bradycardia is available as a low heart rate alarm in neonatal mode |
| ARR Mode | User Selectable; OFF, Basic or Advanced |
| Basic ARR (standard) | Asystole, ventricular fibrillation, ventricular tachycardia, bradycardia, and PVC/min parameter output. |
| Advanced ARR (option) | Ventricular run, accelerated idioventricular rhythm, supra-ventricular tachycardia, couplet, bigeminy, tachycardia, pause and artifact. |

Respiration

| | |
|---------------------|---|
| Sensing lead | II |
| Measuring method | Impedance pneumography |
| Auxiliary current | $< 10 \mu\text{A}$ for any active electrode |
| Detection threshold | 0.2 Ω to 4.0 Ω in manual mode (user adjustment) 0.2 Ω to 1.5 Ω in auto mode (automatic adjustment) |
| Measuring range | 0 to 155 breaths/min |
| Accuracy | ± 1 breath/min or $\pm 2\%$ (whichever is greater) |
| Alarms | User-selectable upper and lower respiration rate |

Pulse Oximetry (SpO₂)

| | |
|----------------------------|--|
| SpO ₂ algorithm | Masimo® SET® (Signal Extraction Technology) Masimo provides the industry "gold standard" for motion tolerant pulse oximetry technology as documented in Masimo's peer reviewed studies (www.masimo.com). See Infinity Masimo SET SmartPod® datasheet for more detailed specifications. |
| SpO ₂ algorithm | Dräger's OxiSure® SpO ₂ |

Dräger's OxiSure SpO₂

| | |
|----------------------|---|
| Connection | MultiMed® pods (SpO ₂ port) |
| Displayed parameters | Saturation (fraction of oxyhemoglobin to functional hemoglobin) and pulse (rate and curve) |
| Measuring method | Absorption-spectrophotometry Pulse 30 to 250 bpm |
| Accuracy | SpO ₂ : 0 to 69% not specified SpO ₂ : 70 to 100% ±2% (except Masimo® LNOP-Ear which is ±3.5% and Nellcor™ DS100A which is ±3%) Saturation accuracy range increases by ±1% for neonates Pulse: ±3 bpm or ±3% (whichever is greater) |
| Alarms | User-selectable upper and lower limits for SpO ₂ and pulse rate |
| Accessories | Dräger-approved Masimo or Nellcor sensors Dräger reusable SpO ₂ sensor (not intended for neonates). |

Temperature

| | |
|----------------------|--|
| Displayed parameters | Absolute temperature |
| Measuring range | 0 to 50 °C |
| Accuracy | Probe: ± 0.1 °C System: ± 0.2 °C |
| Alarms | User-selectable upper and lower limits |
| Accessories | Dräger-approved core and skin probes |

Noninvasive Blood Pressure (NBP)

| | |
|----------------------------|---|
| Displayed parameters | Systolic, Mean and Diastolic pressures |
| Measuring method | Oscillometric utilizing step deflation |
| Modes of operation | Manual (single measurement) or Interval |
| Interval times | Off, 2, 2.5, 3-15 (increments of 1), 30, 45, 60, 120, 180, 240 minutes |
| Heart rate measuring range | 30 to 240 bpm |
| Pressure measuring range | |
| Adult | Systolic: 30 to 250 mmHg Mean: 20 to 230 mmHg Diastolic: 10 to 210 mmHg |
| Pediatric | Systolic: 30 to 170 mmHg Mean: 20 to 150 mmHg Diastolic: 10 to 130 mmHg |
| Neonatal | Systolic: 30 to 130 mmHg Mean: 20 to 110 mmHg Diastolic: 10 to 100 mmHg |

CONTINUING TECHNICAL DATA

Cuff pressure

Default inflation pressure or after technical alarm

| | |
|-----------|------------------------|
| Adult | 160 mmHg \pm 10 mmHg |
| Pediatric | 120 mmHg \pm 10 mmHg |
| Neonatal | 110 mmHg \pm 10 mmHg |

Inflation pressure after a valid measurement

| | |
|-----------|--|
| Adult | (Last Systolic +25 mmHg) \pm 10 mmHg |
| Pediatric | (Last Systolic +25 mmHg) \pm 10 mmHg |
| Neonatal | (Last Systolic +30 mmHg) \pm 5 mmHg |

Maximum inflation pressure

| | |
|-----------|------------------------|
| Adult | 265 mmHg \pm 5 mmHg |
| Pediatric | 180 mmHg \pm 10 mmHg |
| Neonatal | 142 mmHg \pm 10 mmHg |

Minimum inflation pressure

| | |
|-----------|------------------------|
| Adult | 110 mmHg \pm 10 mmHg |
| Pediatric | 90 mmHg \pm 10 mmHg |
| Neonatal | 70 mmHg \pm 10 mmHg |

Connector Quick-release connector with single airway

Invasive Blood Pressure (IBP)

Displays up to 2 pressures (with IBP option and Y-cable)

| | |
|---------------------------|--|
| Measuring method | Resistive strain gauge transducer |
| Display resolution | 1 mmHg |
| Measuring range | -50 to 400 mmHg |
| Frequency ranges | DC to 16 Hz |
| Zero balance range | \pm 190 mmHg |
| Transducer specifications | Dräger-approved transducers with a resistance of 300 to 2000 Ω and an equivalent pressure sensitivity of 5 μ V/V/mmHg \pm 10% |
| Accuracy | \pm 2 mmHg or \pm 3%, whichever is greater, after successful zero and calibration (exclusive of transducer) |
| IBP alarms | User-selectable upper and lower limits for systolic, mean and diastolic pressures |
| Accessories | Dräger-approved pressure transducers |

DISPLAY SPECIFICATIONS

| | |
|----------------|---|
| Type | Thin Film Transistor-Liquid Crystal Display Active Matrix (TFT-LCD) |
| Size | 21 cm (8.4 in.) diagonal |
| Channels | 4 standard |
| Viewing area | 170.9 mm x 129.6 mm |
| Resolution | 640 x 480 pixels |
| User Interface | Rotary knob, easy-to-use menu structure and fixed keys |

Alarms

Priorities 3; High (Life Threatening), Medium (Serious), Low (Advisory)

Connections

MultiMed cables, IBP, NBP Input, PodPort (for optional etCO₂ module), USB (for optional Masimo SmartPod or Scio Four modules), Memory Card Slot, QRS sync output, and Infinity Docking Station, or interface plate. Interface plate provides connection to external VGA or Scio Four modules, and RS232/Alarm output/R50 Recorder. IDS provides connections to Scio module, power supply, alarm output, Infinity network, R50 recorder, and VGA/RS232 output.

Infinity Network

| | |
|---------------------|--|
| Networking method | Wireless or via Infinity Docking Station |
| Wireless encryption | None, WEP, WPA2 |

Some connections are only accessible via the IDS connection, see individual product datasheets for detailed information.

Physical Specifications

| | |
|------------------------|---|
| Cooling | Convection (no fan) |
| Size H x W x D | 215 x 301 x 131 mm (8.5 x 11.9 x 5.2 in.) |
| Weight without battery | 3.32 kg (7.32 lbs.) |

Information Management Capabilities

| | |
|-----------------|---|
| Data storage | 24 hours |
| Data resolution | 60 seconds |
| Trend tables | 1-, 5-, 15-, 30- or 60-minute display formats |
| Trend graphs | 1-, 2-, 4-, 8-, 12- or 24-hour display formats |
| Trend type | Tabular and graphical tables and event recall (10 events) |

Electrical Specifications

| | |
|-------------------------------|---|
| Monitor input voltage | 11 to 14 V DC, 2.5A |
| Power consumption | ≤52 watts (fully loaded) |
| Patient leakage current | ≤10 μ A |
| Protection class | Internally powered (per IEC 60601-1) and for use with specified Class 1 power supplies. |
| AC Power Adapter Requirements | 100-120 VAC, 0.8A or 200-240 VAC, 0.4A |
| Frequency | 50 to 60 Hz |
| Chassis leakage current | <300 μ A @ 110 V AC at 60 Hz <500 μ A @ 220 V AC at 50 Hz |

BATTERY SPECIFICATIONS

Lead-acid battery

| | |
|------------------|--------------------|
| Battery capacity | 75 minutes |
| Charging time | 5.5 hours at 25 °C |

Lithium-ion battery

| | |
|------------------|---|
| Battery capacity | 210 minutes in Bright Mode 240 minutes in Dim Mode |
| Charging time | 8 hours at 25 °C |

Battery capacity varies with parameter configuration.

Battery capacity is specified under the following conditions:

NBP measurement every 15 minutes connected, no etCO₂ and running at 25 °C (77 °F)

Battery capacity may diminish after extended use.

CONTINUING TECHNICAL DATA

Environmental Requirements

Temperature range

| | |
|-----------|-----------------------------------|
| Operating | 0 °C to 45 °C (32 °F to 113 °F) |
| Storage | -20 °C to 50 °C (-4 °F to 122 °F) |

Relative humidity

| | |
|-----------|-----------------------------|
| Operating | 10% to 95%, non-condensing |
| Storage | 10% to 95% (with packaging) |

Atmospheric pressure

| | |
|-----------|---------------------------------|
| Operating | 525 to 795 mmHg (70 to 106 kPa) |
| Storage | 375 to 795 mmHg (50 to 106 kPa) |

Standards

IEC 60601-1(2nd edition) and applicable particular and collateral standards,

IEC 60601-1-2:2004, Electromagnetic compatibility CISPR 11, Class B

The Gamma XL monitor complies with Medical Devices Directive (MDD) 93/42/EEC amended by Council Directive 2007/47/EC and bears the CE mark.

ORDERING INFORMATION

| | |
|------------------|---------|
| Gamma XL Monitor | MS18985 |
|------------------|---------|

Note: Includes pod port. Invasive pressure is optional. (see software options)

| | |
|-------------------------|---------|
| Monitor AC Power Supply | MS18508 |
|-------------------------|---------|

Power Cables

| | |
|-------------------------------------|---------|
| Europe, CEE 7, 2.5 m | 4321712 |
| North America, 5-15A, 2.25 m | 4321720 |
| Switzerland, SEV 1 01 1, 2.25 m | 1851691 |
| Great Britain, BS 1363, 3 m | 1851713 |
| Australia, New Zealand, AS3112, 3 m | 1851705 |
| China, AS 3112, 3 m | 1859714 |
| Denmark, RoHS, 3 m | 1868950 |
| Brazil, RoHS, 3 m | 1875523 |

Mounting

| | |
|--|---------|
| Infinity Docking Station (IDS) + Power Adapter kit | 7265130 |
|--|---------|

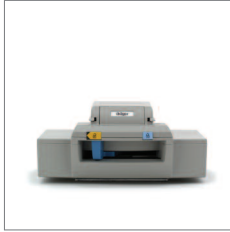
Provides mechanical mounting as well as interfaces for monitor's electrical, network, video, recorder, and RS-232 data export and serial communications.

| | |
|--------------------------|---------|
| Mounting Docking Station | 4715319 |
|--------------------------|---------|

For use in standalone configurations

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|-------------------------|---------|
| Monitor Interface Plate | 3376493 |
|-------------------------|---------|

Provides connections to external VGA/Scio Four Modules, and R50 recorder/RS232.



MT-1816-2006

Infinity Docking Station

MT-1307-2005

Masimo SET SpO₂ Pod

MT-1126-2007

MultiMed Pod

MT-8945-2006

etCO₂ Pod**CONTINUING ORDERING INFORMATION****MultiMed Pods and Cables**

Multi-parameter Cables to Monitor

3-, 5- or 6- lead wire ECG, impedance respiration, SpO₂* and one temperatureMultiMed Plus, 2.5 m MS20093MultiMed Plus OR, 2.5 m MS20094

Supports integrated ESU filter for operating room environment.

MultiMed 5, 2.5 m 3368391MultiMed 6, 2.5 m 5191221NeoMed, 2.5 m 55905393-lead wire ECG, impedance respiration, one temperature and SpO₂
(FiO₂ not supported)MultiMed or NeoMed Pole/Rail Mount MP00721*SpO₂ measurements are not available from the MultiMed pods and cables if you are using an alternate source of SpO₂**SpO₂ Pods**Masimo SET® SpO₂ SmartPod®¹ kit MS16900Pod SpO₂ Masimo USB MS16358**Software Options**Arrhythmia II 7487189Dual IBP; includes 2 IBP channels MS15484OxyCRG 5957480Dual-lead ST-segment analysis 5594978Scio® multigas connectivity MS13205Wireless network support** 7487197

**Wireless LAN PC card (MS25032), and access point installation is required for wireless monitoring.

Hardware OptionsPC memory data card 4718248**etCO₂ and Anesthesia Gas Monitoring**etCO₂ pod (Mainstream/Sidestream)¹ 5740738Scio Four Modules¹ 6871810

Scio Four Oxi plus, Scio Four plus,

Scio Four Oxi and Scio Four modules

Printing/Recording OptionsR50 recorder¹ 5952630R50N network recorder¹* 5740068Infinity Network laser printer (115 V)* 6556513Infinity Network laser printer (220 V)* 6556539

*Requires connection to Infinity Network

¹ Refer to individual module or pod datasheet for additional information.

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The quality management system at
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certified according to ISO 13485,
ISO 9001 and Annex II.3 of Directive
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