

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.



MT-8648-2006

Infinity Gamma XL

Scalable patient monitor that doubles as a transport monitor.

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

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 ± 10 mmHg
Pediatric	120 mmHg ± 10 mmHg
Neonatal	110 mmHg ± 10 mmHg

Inflation pressure after a valid measurement

Adult	(Last Systolic +25 mmHg) ± 10 mmHg
Pediatric	(Last Systolic +25 mmHg) ± 10 mmHg
Neonatal	(Last Systolic +30 mmHg) ± 5 mmHg

Maximum inflation pressure

Adult	265 mmHg ± 5 mmHg
Pediatric	180 mmHg ± 10 mmHg
Neonatal	142 mmHg ± 10 mmHg

Minimum inflation pressure

Adult	110 mmHg ± 10 mmHg
Pediatric	90 mmHg ± 10 mmHg
Neonatal	70 mmHg ± 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	± 190 mmHg
Transducer specifications	Dräger-approved transducers with a resistance of 300 to 2000Ω and an equivalent pressure sensitivity of 5μV/V/mmHg ± 10%
Accuracy	± 2 mmHg or ± 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 μA
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 μA @ 110 V AC at 60 Hz <500 μA @ 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
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Note: Includes pod port. Invasive pressure is optional. (see software options)

Monitor AC Power Supply	MS18508
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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
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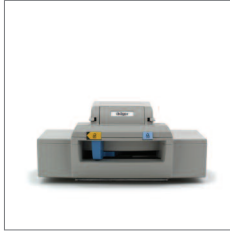
Provides mechanical mounting as well as interfaces for monitor's electrical, network, video, recorder, and RS-232 data export and serial communications.

Mounting Docking Station	4715319
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For use in standalone configurations

Monitor Interface Plate	3376493
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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 temperature

MultiMed Plus, 2.5 m	MS20093
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MultiMed Plus OR, 2.5 m	MS20094
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Supports integrated ESU filter for operating room environment.

MultiMed 5, 2.5 m	3368391
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MultiMed 6, 2.5 m	5191221
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NeoMed, 2.5 m	5590539
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3-lead wire ECG, impedance respiration, one temperature and SpO₂
(FiO₂ not supported)

MultiMed or NeoMed Pole/Rail Mount	MP00721
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*SpO₂ measurements are not available from the MultiMed pods and cables if you are using an alternate source of SpO₂

SpO₂ Pods

Masimo SET® SpO ₂ SmartPod® ¹ kit	MS16900
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Pod SpO ₂ Masimo USB	MS16358
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Software Options

Arrhythmia II	7487189
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Dual IBP; includes 2 IBP channels	MS15484
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OxyCRG	5957480
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Dual-lead ST-segment analysis	5594978
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Scio® multigas connectivity	MS13205
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Wireless network support**	7487197
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**Wireless LAN PC card (MS25032), and access point installation is required for wireless monitoring.

Hardware Options

PC memory data card	4718248
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etCO₂ and Anesthesia Gas Monitoring

etCO ₂ pod (Mainstream/Sidestream) ¹	5740738
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Scio Four Modules ¹	6871810
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Scio Four Oxi plus, Scio Four plus,

Scio Four Oxi and Scio Four modules

Printing/Recording Options

R50 recorder ¹	5952630
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R50N network recorder ¹ *	5740068
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Infinity Network laser printer (115 V)*	6556513
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Infinity Network laser printer (220 V)*	6556539
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*Requires connection to Infinity Network

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

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certified according to ISO 13485,
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