

Infinity® Kappa XLT Patient Monitor

Infinity® Kappa XLT is a split-screen patient monitor that provides Clinical Vision – a comprehensive view of your patient’s condition – on a single, 17” high-resolution touchscreen display. View the patient’s vital signs on one part of the screen and Web-based IT applications or clinical reference data on the other part. Because of this configuration, there are no compromising pop-ups or other obstructions to vital signs data.

The Kappa XLT provides extensive monitoring capabilities to meet even the most challenging patient requirements, and offers sophisticated networking features to improve caregiver productivity.

Features

- Brings the information you need right to the bedside via Web access
- Enables simultaneous viewing of real-time and historic patient data
- Fits easily into space-constrained areas

Monitoring Capabilities

Neonatal, pediatric and adult applications

ECG

Displays up to 12 leads

Available leads

I, II, III, aVR, aVF, aVL, V, V+, V1 - V6 [V, aVR, aVF, aVL only with 5- and 6-lead set, V+ only with 6-lead set, V1 to V6 only with 12-lead pod, (12-lead not intended for neonatal)]

Measuring range

15 to 300 bpm

Accuracy

±2 bpm or ±1% (whichever is greater)

Frequency ranges

Filter off: 0.05 to 40 Hz display;
0.05 to 125 Hz printer

Monitoring filter: 0.5 to 40 Hz

ESU filter: 0.5 to 16 Hz



TECHNICAL DATA

QRS Detection Range

Amplitude	0.5 to 5 mV
Duration	Adult and pediatric: 70 to 120 msec Neonatal: 40 to 120 msec
Alarms	User-selectable upper and lower limits
Pacer detection (adult/pediatric)	Leads: I, II or III Amplitude: ± 2 to 700 mV Width (d_p): 0.2 to 2.0 msec
Accessories	3-, 5-, or 6-lead electrode set or 12-lead pod

ST (not intended for neonatal)**Respiration**

Sensing leads	I, II (user-selectable)
Measuring method	Impedance pneumography
Auxiliary current	$\leq 10\mu\text{A}$ for any active electrode
Detection threshold	0.2 Ω to 4.0 Ω in manual mode (user adjustment): 0.3 Ω to 1.5 Ω in auto mode (automatic adjustment)
Measuring range	0 to 155 breaths per min
Accuracy	± 1 breaths per min or 2% of rate (whichever is greater)
Alarms	User-selectable upper and lower respiration rate

Pulse Oximetry (SpO₂)

Displayed parameters	Saturation (fraction of oxyhemoglobin to functional hemoglobin) and pulse (rate and curve)
Measuring method	Absorption-spectrophotometry
Measuring range	SpO ₂ : 1 to 100% Pulse: 30 to 250 bpm
Accuracy	SpO ₂ : 0 to 69%: not specified SpO ₂ : 70 to 100%: $\pm 2\%$ (except Masimo® LNOP-Ear which is $\pm 3.5\%$ and Nellcor® DS100A which is $\pm 3\%$) Saturation accuracy range increases by ± 1 digit for neonates Pulse: ± 3 bpm or $\pm 3\%$ (whichever is less)
Alarms	User-selectable upper and lower limits for SpO ₂ and pulse rate Life-threatening desaturation alarm
Accessories	Dräger Medical-approved SpO ₂ probes, Masimo or Nellcor sensors (Dräger Medical reusable SpO ₂ probe not intended for neonates)

Second Pulse Oximetry (SpO₂)

Displayed parameters	Saturation, Pulse, Delta (Δ)
Measuring method	Absorption-spectrophotometry
Measuring range	SpO ₂ : 1 to 100% Pulse: 30 to 250 bpm ΔSpO_2 : 0 to 100%
Accuracy	Refer to MicrO ₂ +® Telemetry Pulse Oximetry datasheet
Alarms	ΔSpO_2 : % upper alarm limit only Default: 20% neonatal ΔSpO_2 range: 1 to 100%, 1% resolution

Temperature

Displayed parameters	Absolute and delta temperatures (with hemodynamic pods)
Measuring range	Absolute: -5 °C to 50 °C Delta: 0 °C to 55 °C
Accuracy	Absolute: ±0.1 °C Delta: ±0.2 °C
Alarms	User-selectable upper and lower limits for absolute and delta values
Accessories	Dräger Medical-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): Interval and Continuous (5 min)

Interval times	1, 2, 2.5, 3, 5, 10, 15, 20, 25, 30, 45, 60, 120 and 240 minutes
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Measuring Range (default)

Adult	(Adult 270 mmHg)
Heart rate	30 to 240 bpm
Systolic	30 to 250 mmHg
Mean	20 to 230 mmHg
Diastolic	10 to 210 mmHg

Pediatric	(Pediatric 180 mmHg)
Heart rate	30 to 240 bpm
Systolic	30 to 170 mmHg
Mean	20 to 150 mmHg
Diastolic	10 to 130 mmHg

Neonatal	(Neonatal 140 mmHg)
Heart rate	30 to 240 bpm
Systolic	30 to 130 mmHg
Mean	20 to 110 mmHg
Diastolic	10 to 100 mmHg

Cuff Pressure

Default inflation pressure	Adult (270): 160 mmHg ±10 mmHg Pediatric (180): 120 mmHg ±10 mmHg Neonatal (140): 110 mmHg ±10 mmHg
Inflation pressure after a valid measurement	Adult (270): Systolic +25 mmHg ±10 mmHg Pediatric (180): Systolic +25 mmHg ±10 mmHg Neonatal (140): Systolic +30 mmHg ±5 mmHg
Maximum inflation pressure	Adult (270): 265 mmHg ±5 mmHg Pediatric (180): 180 mmHg ±10 mmHg Neonatal (140): 142 mmHg ±10 mmHg
Minimum inflation pressure	Adult (270): 110 mmHg ±10 mmHg Pediatric (180): 90 mmHg ±10 mmHg Neonatal (140): 70 mmHg ±10 mmHg
Connector	Quick-release connector with single airway

Invasive Blood Pressure

Displays up to 8 pressures

Measuring method	Resistive strain gauge transducer
Display resolution	1 mmHg
Measuring range	-50 to 400 mmHg
Frequency ranges	DC to 8 Hz, DC to 16 Hz, and DC to 32 Hz (user-selectable)
Zero balance	±200 mmHg
Transducer specifications	Dräger Medical-approved transducers with a resistance of 200 to 3000Ω and an equivalent pressure sensitivity of 5μV/V/mmHg ±10%
Accuracy	±1 mmHg or ±3%, exclusive of transducer (whichever is greater)
IBP alarms	User-selectable upper and lower limits for systolic, mean, and diastolic pressures
Accessories	Dräger Medical-approved pressure transducers

Display Specifications

Type	17" Thin Film Transistor – Liquid Crystal Display (TFT-LCD) medical grade monitor with analog resistive touch screen
Resolution	1280 x 1024 with 0.264 x 0.264 dot size (mm)
Viewing Angle	140 degrees

User Interface

Touch screen interface	
Rotary knob – for selection and confirmation of changes	
Easy-to-use menu structure and software fixed keys	
Three alarm levels	Life-threatening, Serious, and Advisory

Connections

MultiMed® pod, HemoMed™ pod, 3 pod comms, (for Hemo2®, Hemo4®, and other pods) NBP input, analog output, QRS sync output, RS 232, alarm output, video output, device connectivity via RS 232, Scio® multigas module via x8, USB Flash, ISD, nurse call system via X1.

Analog Output

Signals	ECG, arterial blood pressure
Delay	<25 ms

Physical Specifications

Kappa XLT Vital Signs Engine

Cooling	Convection / auxiliary fan
Size (H x W x D)	327 x 221 x 114 mm (12.88 x 8.68 x 4.44 in.)
Weight	6.75 lbs. (3.06 kg)

Kappa XLT Display

Cooling	Fan
Size (H x W x D)	377 x 437 x 131 mm (14.84 x 17.20 x 5.15 in.)
Weight	26.5 lbs. (12 kg)

Kappa XLT Power Supply

Cooling	Convection
Size (H x W x D)	93 x 239 x 354 mm (3.65 x 9.39 x 13.95 in.)
Weight	9.15 lbs. (4.15 kg)

Information Management Capabilities

Event storage	150 events, 20 second strips all monitored waveforms
Data storage	96 hours of trended parameter information
Data resolution	30-second sampling
Trend tables	1, 5, 10, 15, 30, or 60-minute display formats
Trend graphs	1, 2, 4, 8, 12, 24, 48, 72 or 96 hour display formats

Electrical Specifications

Power requirements	100 – 240 VAC, 3.7A Max
Mains frequency	50 to 60 Hz
Input voltage	24V DC
Power consumption	<45 watts

Isolation

Patient leakage current	<10 μ A (per IEC 60601-1)
Chassis leakage current	<300 μ A @120VAC, <500 μ A @220VAC

Power Supply Battery

Battery type	Lithium-ion
Battery capacity	30 minutes (using MultiMed with ECG, SpO ₂ , one temperature, HemoMed pod with 4 pressures, and NBP every 10 minutes)
Charging time	8 hours

Environmental Requirements**Temperature Range**

Operating	0° C to 40° C (32° F to 104° F)
Storage	-20° C to 50° C (-4° F to 122° F)

Relative Humidity

Operating	20% to 95%, non-condensing
Storage	10% to 95%

Atmospheric Pressure

Operating	485 to 795 mmHg (70 to 106 kPa)
Storage	375 to 795 mmHg (50 to 106 kPa)

Ordering Information

Infinity Kappa XLT Patient Monitor

Critical Care	8419250
Perioperative Care	8606250
Perinatal Care	MU20525

Basic arrhythmia monitoring is standard with each monitor and includes asystole, ventricular fibrillation, ventricular tachycardia and artifact.

The Infinity Kappa XLT also includes 3-lead ST and the physiological calculator. The calculator offers automatic computation of hemodynamic, oxygenation, and ventilation parameters right on your Infinity modular monitor. Users can choose to enter additional data or change existing data manually.

MultiMed, and all patient connection and intermediate cables must be ordered separately.

Kappa XLT is available in German, English, Italian, French, Spanish, Danish, Norwegian, Swedish, Portuguese, Hungarian, Polish, Chinese, Japanese, Greek, Finnish, Dutch and Russian.

Kappa XLT Software Options

Kappa XLT ARIES 12-Lead ST Option	MS15191
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Infinity ARIES (Advanced Review of Ischemia Event System) for the Infinity Kappa XLT provides 12-lead ST analysis with the MultiMed 12 pod or 8-lead ST analysis with the MultiMed 6 pod.

Kappa XLT ACE® Arrhythmia II Option	MS15192
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Arrhythmia II option augments basic arrhythmia monitoring to include: ventricular run, bradycardia (adult mode), bigeminy, couplet, PVC, supra-ventricular tachycardia, and accelerated idioventricular rhythm

For neonates, the only available arrhythmia alarm is bradycardia.

Layout Configuration Option	MS15193
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Allows user to modify and store custom layouts.

Web Based Access Option	MS15194
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Provides users access to Web browser applications, second network connection required at the bedside – PS2 style keyboard and mouse may be necessary for navigation and must be ordered separately.

OR Mode Option	MS17031
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Allows the monitor to be set in OR Mode which delivers perioperative specific settings, layouts, and alarm behavior.

Device Connection Options

Device connectivity is available on the Kappa XLT patient monitor. There are currently two lengths of cables available, 2 and 4 meter, and a maximum of two devices can be connected at any time.

2-Meter Cable Options

Device connectivity 2 m cable A option	MS15582
Device connectivity 2 m cable B option	MS15495
Device connectivity 2 m cable E option	MS17494
Device connectivity 2 m cable F option	MS17669

4-Meter Cable Options

Device connectivity 4 m cable A option	MS15498
Device connectivity 4 m cable B option	MS15499
Device connectivity 4 m cable E option	MS17493
Device connectivity 4 m cable F option	MS17000

*Note: All devices supported in VF4 are also supported in VF6. This chart shows which version initially supported the device.

*VF4

Cable A

Dräger Evita 2
Dräger Evita 2 Dura
Dräger Evita 4
Dräger Evita XL
Dräger Babylog
Dräger Savina
Baxter Vigilance
Dräger Fabius GS
(Serial Number <ARUK 0001) before Sept 2004

Cable B

Dräger Julian
Dräger Primus
Aspect A-2000 BIS monitor
Dräger Fabius GS
(Serial Number >ARUK 0001) after Sept 2004

VF6

Cable A

MAQUET Servo-i
Abbott Q2 Plus
Dräger Fabius CE
Taema Horus
Dräger Narkomed 4
Dräger Fabius Tiro
(Serial Number <ARUK 0001) before Sept 2004

Cable B

Dräger Apollo
Puritan Bennett 840
Dräger Zeus
Dräger Fabius Tiro
(Serial Number >ARUK 0001) after Sept 2004

Cable E

Dräger Cato
Puritan Bennett 7200 AE

Cable F

Viasys™ Bear Cub 750 PSV
Viasys Bear 1000 Adult

MultiMed Pods

Multi-parameter pods to monitor 3-, 5- or 6-lead ECG, SpO₂ and one temperature (two temperatures with Y-cable).

MultiMed 5	3368391
MultiMed 6	5191221
NeoMed*	5590539

*The NeoMed pod supports monitoring of 3-lead ECG, impedance respiration, two temperatures, SpO₂ and FiO₂.

MultiMed 12 Pod (12-lead ECG and SpO ₂)	5589663
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Kappa XLT Accessories Hardware Options

Note: Refer to individual module or pod datasheet for details concerning connection cables and adapters, transducers and mounting accessories

Hemodynamic Pods

2 IBP Y-adapter, 10-pin 5731281
2 IBP Y-adapter, 7-pin 5592147

HemoMed Pod 5588822

Provides management of up to 4 invasive blood pressures and cardiac output

Hemo2 Pod 4319435

Hemo4 Pod 4315961

Hemo2 provides management of up to 2 invasive blood pressures, cardiac output and 1 additional temperature. Hemo4 Pod provides management of up to 4 invasive blood pressures, cardiac output and 1 additional temperature.

etCO₂ Microstream® Pod 7870947

etCO₂ Pod 5740738

tpO₂/tpCO₂ Pod 5592535

etCO₂+ Respiratory Mechanics Pod 5740704

Scio multigas module 6871450

EEG Pod 5736744

Infinity Trident® SmartPod® MS15007

Infinity BISx SmartPod MS14796

Infinity Masimo SET® SpO₂ SmartPod MS16903

Printing Options

R 50-N 2-channel network recorder 5740068

Infinity network laser printer (115V) 6556513

Infinity network laser printer (220V) 6556539

Standards

EN 60601-1 and applicable particular and collateral standards,
EN 60601-1-2, Electromagnetic compatibility CISPR 11, Class B

The Kappa XLT monitor complies with Medical Devices Directive (MDD) 93/42 EEC and bears the CE mark.

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The quality management system at Draeger Medical Systems, Inc. is certified according to ISO 13485, ISO 9001 and Annex II of Directive 93/42/EEC (Medical devices).