Infinity® MCable®-Microstream® CO_2

With Infinity® MCable®-Microstream® CO_2, measuring the presence of carbon dioxide helps you detect changes in your patient's ventilatory status to pre-empt possible respiratory depression. You'll see continuous waveforms and readings for end-tidal CO_2 concentration, inspiratory CO_2 concentration and respiratory rate on the patient's Infinity M540 monitor.

D-2422-2016

Dräger. Technology for Life®

Benefits

Provides continuous surveillance

Capnography provides valuable information about a patient's evolving respiratory status. The early detection of respiratory compromise can lead to a more successful clinical intervention and, potentially, a positive patient outcome.

Complements pulse oximetry

Combining capnography, pulse oximetry and heart rate measurements on the Infinity M540 monitor gives you a complete picture of a patient's respiratory function in a single view. Continuous monitoring of respiratory status has been shown to reduce rescue events and ICU transfers.[1]

Serves a wide range of patients

Infinity Microstream CO_2 MCable is indicated for intubated and non-intubated patients with a wide selection of sampling lines in neonate, pediatric and adult sizes. Its low flow 50 ml/minute sample rate is effective for all patient types.

Reduces distractions

The Microstream technology of the Infinity MCable-Microstream CO_2 uses algorithms proven to generate fewer non-essential alarms, potentially improving clinical efficiency and patient safety.[2,3]

Works with your Infinity Acute Care System

The plug-and-play Infinity MCable-Microstream CO_2/Infinity M540 patient monitoring combination is a cost-effective solution, compared with purchasing and maintaining a standalone CO_2 monitor for every patient bed.

1 Taenzer AH, Pyke JB, McGrath SP, Blike GT. Impact of pulse oximetry surveillance on rescue events and intensive care unit transfers: a before-and-after concurrence study. Anesthesiology. 2010;112(2):282-287.

2 Hockman S, Glembot T, Niebel K. Comparison of capnography derived respiratory rate alarm frequency using the SARA algorithm versus an established nonadaptive respiratory rate alarm management algorithm in bariatric surgical patients. Resp Care (Open Forum Abstracts). 2009;12.

3 ECRI Institute. The Hazards of Alarm Overload: Keeping Excessive Physiologic Monitoring Alarms from Impeding Care. ECRI Guidance Article, March 2007.

Accessories

MT-3012-2004

Sampling lines

Collect and filter breathing samples of neonatal, pediatric and adult patients which are subsequently measured by the MCable-Microstream CO_2. The accessories feature single-patient-use lines for intubated and non-intubated procedures.

D-2420-2016

MCable-Microstream CO_2 holder

Secures the MCable-Microstream CO_2 and provides a mechanism for mounting the device.

D-2423-2016

Universal pole mount

MCable-Microstream CO_2 can be mounted on an IV pole for use during transport or at the bedside.

D-2418-2016

MCable-Microstream CO_2 pole mount adapter

Adapts the MCable-Microstream CO_2 holder to allow mounting of the MCable to an IV pole or bedrail via the universal clamp.

Accessories

D-2417-2016

MCable-Microstream CO_2 extension cable (0.9 m)

Lengthens the MCable-Microstream CO_2 connecting cable to the Infinity M540 monitor.

D-2427-2016

SpO_2 pod mount

Allows the MCable-Microstream CO_2 to be mounted to the back of the Infinity M540 monitor by sliding and securing the MCable-Microstream holder onto the SpO_2 pod mount.

Related Products

D-19701-2009

Infinity® M540

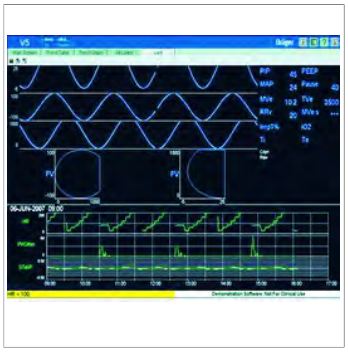
Streamline workflows with a monitor that goes from bedside to transport in the push of a button. Leave cables and modules attached to your patient and continue monitoring parameters and alarms in real time, while recording data during travel. Use the Infinity M540 as a standalone monitor, or integrate it with hospital IT to access clinical information systems and data analysis applications.

Related Products

D-19739-2009

Infinity® Acute Care System

Transform your clinical workflow with Infinity® Acute Care System. Its multiparameter monitor integrates with its networked medical-grade workstation, giving you real-time vital signs, access to clinical hospital systems and data management applications for a comprehensive range of patient information and powerful analysis tools at the point-of-care.



D-1195-2009

Infinity® Gateway Suite

Get the most out of your clinical information systems. Integrate data from Dräger monitoring and therapy devices with lab results, entries in electronic medical records and clinical information systems across hospital departments. Infinity Gateway applications, interfaces and developer tools enable you to exchange information for a more comprehensive view of your patients.

Technical Data

Microstream carbon dioxide concentrations (CO_2)	
CO_2 units	mmHg or kPa or vol% (as relevant to Microstream capnography)
$etCO_2$, $inCO_2$ range	0–99 mmHg (as relevant to the Microstream capnography)
CO_2 waveform resolution	0.1 mmHg
$etCO_2$, $inCO_2$ resolution	1 mmHg
CO_2 partial pressure accuracy	0 to 38 mmHg ± 2 mmHg[1,2,3] 39 to 99 mmHg ± [5% of expected reading + 0.08 x (expected reading in mmHg - 39 mmHg)][1,2,3]
Accuracy in presence of interfering gases as required by ISO 80601-2-55	The accuracy in presence of interfering gases is within 4% of the accuracy values above; therefore: – 0 to 38 mmHg: ± (2 mmHg + 4% of expected reading in mmHg) – 39–99 mmHg: ± [9% of expected reading in mmHg + 0.08 x (expected reading in mmHg - 39 mmHg)] – 0 to 38 mmHg ± (2 mmHg + 4% of expected reading in mmHg) in the presence of up to 80% helium with up to 15% oxygen – 39–99 mmHg: ± [9% of expected reading in mmHg + 0.08 x (expected reading in mmHg - 39 mmHg) in the presence of up to 80% helium with up to 15% oxygen
Waveform sampling	20 samples/second
Respiratory rate range	0 to 150 breaths per minute
Respiratory rate accuracy	0 to 70 breaths per minute ± 1 breaths per minute 71 to 120 breaths per minute ± 2 breaths per minute 121 to 150 breaths per minute ± 3 breaths per minute
Flow rate	50 mL per minute (tolerance -7.5, +15), flow measured by volume
Leakage rate	Less than 40 mbar per minute when a 30% vacuum is invoked on the flow system.

System Response	
Rise time	<190 ms.
Delay time	<2.7 sec. After the system warm up and during steady state Microstream MCable use: the maximum delay time between patient breath and its report on the CO_2 waveform is 2.9 sec.
Warm-up period	Includes power-up time (10 seconds maximum) and initialization time (180 seconds). Total warm-up time 1 minute and 30 seconds maximum.
Compression	BTPS is the standard correction used by Microstream capnography during all measurement procedures for body, temperature, pressure, and saturation.

[1] Applies for respiratory rates up to 80 breaths per minute.

[2] For respiratory rates above 80 breaths per minute, accuracy is 4 mmHg or ± 12% of reading, which-ever is greater, for $etCO_2$ values exceeding 18 mmHg.

[3] For respiratory rates above 60 breaths/minute, the Microstream FIlterLine H Set for Infant/Neonatal is required.

Physical specifications	
MCable dimensions (height x width x depth)	92 mm (3.6 in) x 70 mm (2.7 in) x 49 mm (1.9 in)
MCable weight	240 grams (0.52 pounds)
MCable Holder dimensions (height x width x depth)	106 mm (4.2 in) x 87 mm (3.4 in) x 70 (2.8 in)
MCable Holder weight	100 grams (3.52 ounces)

Technical Data

Electrical specifications	
Power source	Powered directly from the M540
Mode of Operation	Continuous
Risk management	
Protection against electrical shock	Type BF
Protection against liquid ingress	IPX2 (protected against vertically falling water drops) per IEC 60529
Defibrillator protection	Yes

Ordering Information

MCable-Microstream CO_2	**Order No.**
MCable-Microstream CO_2 kit	MS33160
MCable-Microstream CO_2	MS32641
MCable-Microstream CO_2 holder	MS32642
MCable-Microstream CO_2 pole mount adapter	MS32774
Universal pole mount	74 85 621
MCable-Microstream CO_2 extension cable	68 72 159
Test gas etCO_2 kit	MS16684
Microstream CO_2 Accessories for Intubated Patients	
Adult/Pediatric	
CO_2 Microstream airway adapter, adult/pedi	78 69 535
CO_2 Microstream airway adapter, ICU, adult/pedi	78 69 543
Neonate/Pediatric	
etCO_2 Microstream airway adapter, neo/pedi	78 69 550
Microstream CO_2 Accessories for Non-intubated Patients	
Adult	
CO_2 Microstream nasal cannula, adult	78 69 477
CO_2 Microstream nasal cannula, ICU, adult	78 69 592
CO_2 Microstream nasal cannula plus 02, adult	78 69 493
CO_2 Microstream nasal/mouth cannula, adult/intermediate	MS26187
CO_2 Microstream nasal/mouth cannula plus 02, adult/ intermediate	MS26188
Pediatric	
CO_2 Microstream nasal cannula, pedi	78 69 469
CO_2 Microstream nasal cannula plus 02, pedi	78 69 485
CO_2 Microstream nasal/mouth cannula plus 02, pedi	78 69 584
CO_2 Microstream nasal cannula, pedi	78 69 501
Neonate/Pediatric	
CO_2 Microstream nasal cannula ICU, neo/pedi	78 69 618

Notes

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