



Welcome to the next level

DRÄGER PRIMUS®
INFINITY® EMPOWERED

MT-5479-2008

Keeping you connected



D-16185-2009

Being at the center of the process means you have to communicate with many different sources. It means being both informed and providing information to others. You're playing a vital role in an increasingly complex healthcare system. To provide state-of-the-art care every step of the way in the most cost-effective way possible, it's essential to get connected. So why settle for a solution that wasn't built to meet those challenges?

After listening to medical professionals from all over the globe, we decided to create an anesthesia workstation that will change the way you work forever. One that will help you meet the difficult challenges you face every day. One that will take you to the next level. The Dräger Primus Infinity Empowered represents a substantial innovation in anaesthesia therapy and monitoring and was designed to work hand in hand with the Infinity Acute Care System.

THE POWER OF INFINITY®

Our Infinity Acute Care System is a clinical process optimization approach that focuses on your workflow and is designed to help improve workplace ergonomics, overcome technical limitations, reduce complexity, improve information access and support safer and faster patient transports.

The Primus IE can be equipped with our innovative Infinity ID accessories, that are based on the RFID (Radio Frequency Identification) technology. These accessories were developed to simplify handling and optimize workflows.

Introducing the Dräger Primus[®] Infinity[®] Empowered

SUPPORT

The Dräger Primus Infinity Empowered combines time-tested design with state-of-the-art technology to answer the demand for an innovative, comprehensive anesthesia solution for today's increasingly complex medical environments. It was built to provide optimal workflow support in practically every phase of the OR process.

CONNECTIVITY

Built to work seamlessly with the Dräger Infinity Acute Care System, the Primus Infinity Empowered lets you take advantage of the modern monitoring and anesthesia information system solutions as well as hospital information system technology, making comprehensive data integration directly at the point of care possible.

SIMPLICITY

The Primus Infinity Empowered features the familiar user interface concept common to all current Dräger medical devices. With its clear, intuitive structure it supports a rapid familiarization process, making it easier for your staff to learn to operate.



EFFICIENCY

Preparation, documentation, pre- and postoperative routines and maintenance are essential components of the OR process. A fully automated self test feature is just one example of this kind of process support. Because the Primus Infinity Empowered incorporates an electrically driven piston ventilator, it requires no drive gas. With the Primus Infinity Empowered, you'll quickly discover and utilize efficiency reserves in your perioperative workflow that will help you create the most cost-effective working environment possible.



Critical care ventilation



The next level of reliable performance

Today's high acuity levels and rising comorbidity are driving the demand for new standards for anesthesia platforms. Equipped with Dräger's advanced E-Vent plus high-speed electric piston ventilator, the Primus Infinity Empowered delivers just that – peak flow comparable to ICU ventilators and a full range of volume and pressure oriented modes that will provide the therapy options you need in daily clinical situation. An adjustable flow trigger helps reduce respiratory work, and PEEP can be maintained regardless of the ventilation mode.

Aside from its wide range of available ventilation modes, the Primus Infinity Empowered offers options such as pressure support ventilation for spontaneously breathing patients and Volume AutoFlow ventilation for patients with significant pulmonary obstruction. The Primus Infinity Empowered puts the power of true ICU-quality ventilation to work for you, providing clear advantages for pediatric and critical care patients



The advanced features

Taken together, the advanced features of the Dräger Primus® Infinity® Empowered let you bring ICU-quality ventilation to the operating room, providing your patients with a new level of care.

- Improved neonatal ventilation with accurate tidal volume settings down to 5 ml and frequencies up to 100 1/min
- Continuous positive airway pressure with pressure support ventilation allows spontaneous breathing on a set pressure level
- Breathing system heater and active gas recycling support for comfortable and economical minimal flow ventilation
- The Econometer: Decision support for optimal low flow settings, helping to eliminate gas deficiencies safely and easily.



INTUITIVE USER INTERFACE

Learning to use sophisticated new equipment can be a daunting and sometimes intimidating task. That's why Dräger has developed and maintained a common user interface and operating philosophy for a wide range of our medical equipment. But even in the unlikely event that the Primus Infinity Empowered is the first Dräger device you've ever used, you'll soon discover that the large and extremely intuitive TFT color user interface will guide you through its features and systems with minimal time and effort.

COMPREHENSIVE MONITORING

The Primus Infinity Empowered not only provides state-of-the-art therapy. Equipped with our most advanced, open architecture monitoring concept, it can be configured individually around your workflow. In combination with Infinity Explorer you get networked access to lab data, X-rays and PDMS that will facilitate transparency directly at the point of care. Dräger's unique Pick and Go transport concept not only offers seamless data monitoring and documentation during transport, it also cuts down on the total number of monitors needed for your processes. The result will save you time, money and maintenance. Our innovative pod-based cable management featuring cable consolidation significantly reduces staff workloads and patient preparation time by making connections quick, easy and clutter-free.

INNOVATIVE INFINITY® ID APPLICATION SUPPORT

The Primus Infinity Empowered offers innovative features in connection with our newly developed range of Infinity ID accessories. This new technology improves both the reliability and efficiency of the overall OR process:

- **Configuration control** to detect the connected breathing circuit type and to adjust the device settings accordingly
- **Exchange control** to remind the clinical personnel of preselected replacement intervals for the breathing circuit
- **Compatibility control** to check automatically if the detected Infinity ID accessory is compatible to the current configuration of the device

System Components and Accessoires

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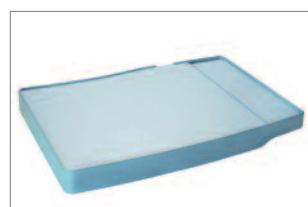
Compact Breathing System
Easy to mount and disassemble breathing system with integrated heater.

MT-6506-2008



Integrated Oxygen Therapy
featuring O₂ supply up to 12 L/min and mechanical airway pressure monitoring.

D-21159-2009



Large Writing Tray
This writing tray can easily be mounted and it fits A3 paper format.

D-19275-2009



Infinity® ID Breathing Hoses
The ID breathing circuits offer a new and wide range of comfort properties.

D-10517-2009



Infinity® ID WaterLock 2
The ID WaterLock 2 tells you when to exchange it.

D-15692-2009



Infinity® ID CLIC Absorber
Easy to change soda lime cartridges, even during operation.



DRÄGER EDUCATION & TRAINING

The healthcare sector faces a constant challenge of continuing medical education in order to meet stringent quality standards, often with little or no available budget, and the safe and effective use of medical devices is an essential part of that challenge. Our education and training tools, including everything from basic device training to management skill courses, help your staff develop the knowhow they need to make the most of your investments and your resources.

TECHNICAL DATA PRIMUS® INFINITY® EMPOWERED

Operating data	
Weight	147 kg (without vaporizers or cylinders)
Dimensions (H x W x D)	138 cm x 80 cm x 80 cm
Power	200 W, typical, max. 2.5 kW with power drawn from auxiliary outlets
Operating voltage	100–240 V~, 50/60 Hz, max. 12.4 A
Integrated power backup	at least 30 minutes, up to 90 minutes, depending on ventilation mode
Serial interface	2 x RS 232, 1 x Dräger Base (IV System)
Protocol	Medibus
Ventilator E-Vent® plus	Electrically driven and electronically controlled
Operating Modes	Manual, spontaneous Volume Mode; synchronized, optional with PS Pressure Mode; synchronized, optional with PS Option: Pressure Support (PS), Volume Mode AutoFlow; synchronized, optional with PS (PEEP+10) up to 70 hPa (PEEP+5) up to 70 hPa
Pressure limitation P _{MAX} (in Volume Mode)	(PEEP+10) up to 70 hPa
Pressure limitation P _{INSP} (in Pressure Mode)	(PEEP+5) up to 70 hPa
Trigger	0.3–15 L/min
Tidal volume (in Volume Mode)	20–1400 mL, 5–1400 mL with option Advanced Ventilation
Tidal volume (in Pressure Mode)	to 1400 mL
Breathing frequency (freq.)	3–100 1/min
Inspiration time (T _{INSP})	0.2–6.7 s
Inspiration/Expiration time ratio (I:E)	max. 5:1 to 1:99
Plateau time (T _{IP} :T _{INSP})	0–60 %
Inspiratory flow	max. 150 L/min
PEEP in Volume Mode	0–20 hPa (max. P _{MAX} –10 hPa)
PEEP in Pressure Mode	0–20 hPa (max. P _{INSP} –5 hPa)
Fresh-gas flow	0 and 0.2–18 L/min (electronically controlled fresh-gas delivery)
T _{SLOPE} (in Pressure Mode and Pressure Support)	0–2 s
Total system leakage	< 150 mL at 30 hPa (automatic leak test)
O ₂ flow control	O ₂ concentration: 21–100 Vol.% Sensitive ORC function: at least 25 Vol.% or 200 mL/min for nitrous oxide (N ₂ O) as carrier gas
O ₂ flush	> 35 L/min
O ₂ safety flow	0–12 L/min
Flow meter for oxygen delivery	optional; 0 to 10 L/min
External fresh gas outlet	optional
Monitoring:	
Inspiratory and expiratory concentration of O ₂ , N ₂ O, CO ₂ as well as anesthetic agents (Halothane, Enflurane, Isoflurane, Sevoflurane, Desflurane); Minute volume (MV) and Tidal volume (VT); Breathing frequency; Peak pressure, plateau pressure, mean pressure, PEEP; Patient compliance CPAT; Option: Functional oxygen saturation (SpO ₂)	
The following parameters maybe displayed as waveforms: Concentration of CO ₂ , O ₂ , as well as anesthetic agents, airway pressure, inspiratory and expiratory flow; Option: Plethysmogram; Bar graph display of volumeter and tidal volume; Virtual flow tubes for O ₂ , AIR, N ₂ O; Display of graphical trends and numerical lists of measured values; AutoSet for alarm limits	
Consumption measurement	Fresh-gas consumption per case, Total agent consumption per case (option Advanced Monitoring), Agent consumption due to patient uptake per case (option Advanced Monitoring)

The colors of Primus Infinity Empowered may differ from the color of the Primus Infinity Empowered pictures in this brochure.

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The quality management system at Dräger Medical GmbH is certified according to ISO 13485, ISO 9001 and Annex II.3 of Directive 93/42/EEC (Medical devices).