



Your personal anesthesia assistant

DRÄGER PRIMUS®

An entire world of care



You're playing a vital role in an increasingly complex healthcare system. Your job is to provide state-of-the-art care every step of the way, and to do it in the most cost-effective way possible. So why settle for a solution that wasn't built around your needs and the needs of your patients?

In today's highly integrated hospital environment, anaesthetists often find themselves at the very core of a highly complex process. Faced with factors such as new and demanding procedures and techniques, increased patient throughput, spiraling costs and even personnel shortages, efficiency has become one of the most important goals for any modern healthcare institution. But being efficient requires an intimate knowledge of the processes involved – and finding elegant solutions that precisely address those problems. At Dräger, it's something we've been doing for over a century. After listening medical professionals around the world, we decided to create an anesthesia workstation that was designed to be nothing less than your personal anesthesia assistant.



Introducing the Dräger Primus®

SUPPORT

The Dräger Primus 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. Its ergonomic design provides reliable workflow support in practically every phase of the OR process.

CARE

The advanced, ICU-quality ventilation and monitoring capabilities offered by the Primus workstation make it perfectly suited for adults, children and neonates of any acuity level.

SIMPLICITY

The Primus features the familiar user interface concept common to all current Dräger medical devices. Its clear, intuitive structure 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. Its fully automated self check feature is just one example of this kind of process support. Because the Primus incorporates an electrically driven piston ventilator, it requires no drive gas. With the Primus, you'll quickly discover and utilize efficiency reserves in your perioperative workflow that will help you create a cost-effective working environment.

Advanced therapy at your fingertips



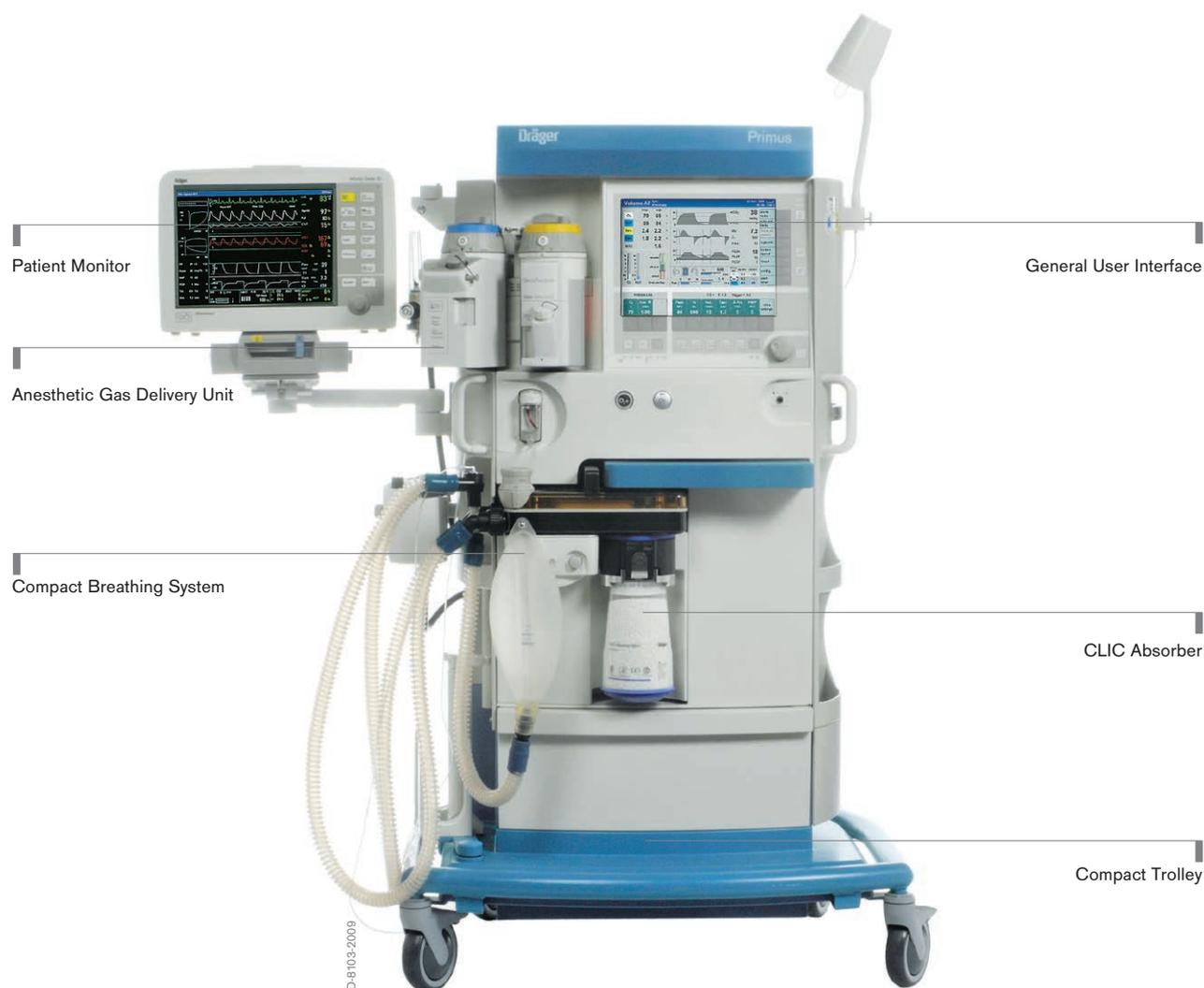
OUTSTANDING VENTILATION

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 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 any clinical situation.

Aside from its wide range of available ventilation modes, the Primus offers options such as pressure support ventilation for spontaneously breathing patients and Volume AutoFlow ventilation for patients with significant pulmonary obstruction. Thanks to its piston ventilator technology, combining peak flows and fast response times, the Primus offers important benefits. An adjustable flow trigger helps reduce respiratory work, and PEEP can be maintained regardless of the ventilation mode.

Taken together, the Primus puts the power of true ICU-quality ventilation to work for you, providing clear advantages for pediatric and critical care patients.

Additional ventilation mode packages are also available that will expand your capabilities even further, bringing the advantages of spontaneous breathing to both volume and pressure controlled ventilation modes (upgrade packages "Advanced Ventilation" and "Volume AutoFlow").



COMPREHENSIVE MONITORING

The Primus not only provides state-of-the-art therapy. Equipped with one of the most advanced, open architecture monitoring concepts on the market today, the Primus workstation can be configured individually around your workflow. You can customize your own workplace by integrating our Infinity Patient Monitoring System and information management system. 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.

Additional monitoring options providing enhanced, real-time visual information such as PV and flow loops are available (upgrade package "Advanced Monitoring").

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. If you've used a Dräger device before, you'll probably find that you can learn to use a new one very quickly. Of course, the Primus is no exception. But even in the unlikely event that the Primus is the first Dräger device you've ever used, you'll soon discover that the large and extremely intuitive TFT color user interface will help you through its features and systems with minimal time and effort.



MT-2004-2003

PERIOPERATIVE WORKFLOW

An optional data link to the Infinity Patient Monitoring System brings additional support to your perioperative processes. The Infinity system gives you access to up to 24 hours of continuous patient information from the ER or ICU prior to surgery and a continuous record for post-surgery follow up and analysis.

Training for the challenges of tomorrow



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. In the modern medical world, 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 knowhow they need to make the most of your investments and your resources.

System Components and Accessoires



D-8103-2009

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



MT-554-2001

Auxiliary Oxygen Therapy
featuring O₂ therapy, supplied by Primus gas delivery.



D-21159-2009

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



MT-92-2002

External Fresh-gas outlet
for connection of semi-open breathing systems.



MT-93-2002

Halogen lamp
For workplace illumination.



MT-2006-2008

Dräger CLIC system
New Clic system for easy exchange of soda lime during operation.

TECHNICAL DATA PRIMUS

Gas flow control	
Weight	115 kg (without vaporizers or cylinders)
Dimensions (H x W x D)	137 cm x 80 cm x 80 cm
Power	200 W, typical
Operating voltage	100–240 V~, 45–65 Hz
Integrated power backup	at least 30 minutes, typical 90 minutes, depending on ventilation mode
Ventilator E-Vent® plus	Electrically driven and electronically controlled
Operating Modes	Manual, spontaneous, Volume Mode (IPPV), Pressure Mode (PCV), Optional: Pressure Support (PS), Synchronized volume controlled ventilation (SIMV), optional with PS, Synchronized pressure controlled ventilation, optional with PS
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 (option)
Tidal volume (in Pressure Mode)	10–1400 mL
Breathing frequency (freq.)	3–80 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 (in Pressure Mode)	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
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	Sensitive ORC function: at least 25 Vol.% or 200 mL/min for nitrous oxide (N ₂ O) as carrier gas; O ₂ concentration: 21–100 Vol.%
O ₂ flush	> 35 L/min
O ₂ safety flow	0–12 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
Serial interface	3 x RS 232
Protocol	Medibus
Absorber volume	1.5 L

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

CORPORATE HEADQUARTERS

Drägerwerk AG & Co. KGaA
Moislinger Allee 53–55
23558 Lübeck, Germany

www.draeger.com

Manufacturer:

Dräger Medical GmbH
Moislinger Allee 53–55
23558 Lübeck, Germany

As of August 2015:

Dräger Medical GmbH changes
to Drägerwerk AG & Co. KGaA.

REGION EUROPE CENTRAL

AND EUROPE NORTH

Dräger Medical GmbH
Moislinger Allee 53–55
23558 Lübeck, Germany
Tel +49 451 882 0
Fax +49 451 882 2080
info@draeger.com

REGION EUROPE SOUTH

Dräger Médical S.A.S.
Parc de Haute Technologie d'Antony 2
25, rue Georges Besse
92182 Antony Cedex, France
Tel +33 1 46 11 56 00
Fax +33 1 40 96 97 20
d1mfr-contact@draeger.com

REGION MIDDLE EAST, AFRICA

Dräger Medical GmbH
Branch Office
P.O. Box 505108
Dubai, United Arab Emirates
Tel +971 4 4294 600
Fax +971 4 4294 699
contactuae@draeger.com

REGION ASIA / PACIFIC

Dräger Medical
South East Asia Pte Ltd.
25 International Business Park
#04-27/29 German Centre
Singapore 609916, Singapore
Tel +65 6572 4388
Fax +65 6572 4399
asia.pacific@draeger.com

AND SOUTH AMERICA

Dräger Panama Comercial S. de R.L.
Complejo Business Park,
V tower, 10th floor
Panama City
Tel +507 377 9100
Fax +507 377 9130
contactcsa@draeger.com