Keep your target in sight
Because a single picture can often say more than words, considerable emphasis has been placed on the field of visualization. Advanced computers can handle and manipulate huge amounts of data so quickly that the process of visualization is possible, for all practical purposes, in real time.

The SmartPilot View provides visual support for the anaesthesiologist throughout the entire anaesthesia process. Using advanced mathematical modelling algorithms, it shows prospective calculated drug concentrations for any given dosage, taking into account known interactions. This supports the anaesthesiologist in achieving his prime goals: Smooth induction, effective maintenance of anaesthesia levels and rapid, well-timed recoveries. The SmartPilot View also lets you document standard and user-defined events during the procedure, such as intubation, incision or patient positioning.
Advanced process support.
The SmartPilot® View provides valuable support during the entire OR process— from induction to recovery.

DECISION SUPPORT
What level of anaesthesia will result after the administration of a combination of volatile and intravenous drugs? Until now, anaesthesiologists have had to rely solely on mental arithmetic and experience. SmartPilot View now turns drug dosage data into visual information on the anaesthesia level that’s easy to understand— without the need for additional sensors.

TRANSPARENCY IN ANAESTHESIA
Estimating the concentrations of anaesthetic agents and the duration of their effects requires broad-based knowledge and experience. SmartPilot View helps you avoid under- and over-dosage by visualizing both pharmacokinetics and drug interactions. SmartPilot View displays a history of individual agent concentrations as well as resulting drug interactions, providing you with the full picture of what you have already administered— or intend to administer next.

PROCESS OPTIMIZATION
A major efficiency factor in the OR environment is timing. Delayed patient recovery and postoperative drowsiness can have a negative effect on your throughput. The SmartPilot View supports the estimation of wake up times with the help of a simple indicator.
SmartPilot® View: the new dimension of anaesthesia decision support

Y-axis = Calculated hypnotic drug concentration at effect site

Event markers can be set as references for the status of the patient

White point shows calculated drug concentration at the effect site

Black point shows forecast of calculated drug concentrations in 10min

X-axis = Remifentanil equivalent calculated drug concentration at effect site

Isobole MAC90: probability that 90% of patients tolerate skin incision based on population statistics (pharmacodynamics)
Vital signs from patient monitoring

BIS Index based on processed EEG

Noxious Stimulus Response Index (NSRI): Information from the 2d display translated and plotted over time

Lines show trend and prediction of bolus as well as continuous infusion for each drug

Grey curves show calculated drug concentration at the effect site compartment

Timescale displaying history, present and prediction as well as event and bolus markers
Anaesthesiologists of any experience level can profit from the SmartPilot View. Consultants and supervisors can take advantage of obtaining a rapid overview of the course of procedures in the ORs they are responsible for. It’s also a great tool when transferring responsibility during a procedure. Because the SmartPilot View provides visual feedback on the dose/effect ratio, it supports the learning and decision decision-making during procedures.

**THE USE OF DRÄGER SMARTPILOT® VIEW CAN SUPPORT THE ANAESTHESIOLOGIST IN:**
- analysing the anaesthetic effect and optimizing the complex dosing process
- providing adequate anaesthesia induction, maintenance and recovery
- reducing the risk of postoperative pain
- improving the efficiency of anaesthesia

**COMPATIBILITY INFORMATION**
The SmartPilot View consists of the SmartPilot View application software and requires an Infinity C700 for IT with Infinity Explorer software for operation. It is designed for use with Zeus and Zeus Infinity Empowered workstations as well as Primus and Primus Infinity Empowered workstations. Either an integrated IVenus infusion pump system (Zeus, ZeusIE) or an interfaced third-party solution, such as the B. Braun Space or Fresenius Orchestra is also required.
PRIMUS® INFINITY® EMPOWERED WITH SMARTPILOT® VIEW
- Comprehensive overview on a 20" multi-application screen
- Easy accessibility via application view tabs
- Prediction of anaesthesia level, based on pharmacokinetics and -dynamics
- Data transfer of syringe pump settings, Primus measured ventilation and gas concentration values
- Editable drug data base

ZEUS® INFINITY® EMPOWERED WITH SMARTPILOT® VIEW
- Comprehensive overview on a 20" multi-application screen
- Easy accessibility by application view tabs
- Prediction of anesthesia level, based on pharmacokinetics and -dynamics
- Preview of anaesthesia level before ventilator and drug settings are confirmed (“What if?”)
- Data transfer of syringe pump settings, Zeus target settings, measured values and drug configuration
- Editable drug data base

SMARTPILOT® VIEW TRAINER
The perfect addition to your SmartPilot View is the Simulation software: SmartPilot View Trainer* for use outside of the clinical workplace. The software runs on most standard PC’s and mirrors the display and the control functionality of your SmartPilot View. Using the same mathematical models, the trainer gives you a realistic simulation of the underlying pharmacokinetics and pharmacodynamics during balanced or intravenous anaesthesia. The simulation even includes the SmartPilot View prediction function (“What if?”) for changing drug settings, which is available in combination with the Zeus Infinity Empowered.

The SmartPilot View Trainer effectively supports your training and teaching efforts, allowing you to visualize the effects of various anaesthesia regimes and even drug interactions outside the OR. In addition, real cases recorded with a SmartPilot View can be run on the simulator for postoperative review and analysis of typical or even critical situations.

* currently under development, contact your sales representative for availability; SmartPilot View Trainer is not part of the product solution
SmartPilot® View
Software version 1.n
For use with Draeger Infinity® C700 for IT and Infinity Explorer.

Classification
Classification in accordance with Directive 93/92/EEC Annex IX Class IIb

General
SmartPilot View for online calculation of anaesthesia drug effect for use with total intravenous (TIVA) and balanced anaesthesia.
Display of hemodynamic measurements and processed EEG (BIS® Aspect)
Drug and dosage data entry for intravenous drugs: manually or automatically from the syringe pumps and for inhaled anesthetics: automatically from anesthesia device.
Event markers allow documenting the patient’s individual status with regard to the observed anaesthesia level. The markers may be deleted or repositioned if needed.
Support of USB stick for case recording.
Editable drug data base

PK/PD Models
Interaction between volatile and intravenous hypnotics and opioids visualized through 2-dimensional graph with history and 15min prediction.
PK models for each single drug visualized through time based trend with history and 20min prediction.
Manual entry of drug bolus at actual time or retrospectively followed by recalculation of the case, incl. prediction

Supported drugs
Hypnotics:
- volatile drugs: Desflurane, Enflurane, Isoflurane, Sevoflurane
- intravenous drugs: Propofol
Opioids: (intravenous) Fentanyl, Remifentanil, Alfentanil, Sufentanil
Muscle relaxants*: Pancuronium, Rocuronium

* The impact of muscle relaxants on the drug interaction is not taken into account.

Patient demographic data
Height
150 – 200 cm
Weight
40 – 140 kg
Age
18 – 90 years
Body mass index (BMI)
< 30


System compatibility
Anaesthesia devices: Zeus, Zeus IE, Primus, Primus IE
Monitoring: Delta, Delta XL, Zeus integrated hemodynamic monitoring

Display of patient measurements and processed EEG (BIS® Aspect) provided by the basic device:
Heart rate
1/min
Blood pressure (ART M or NIBP)
mmHg
etCO₂
mmHg
BIS Index

Infusion pumps
Draeger Medical IVenus**
B. Braun Space com**
Range of supported infusion pumps is expanding, please contact your Draeger representative for the current list of compatible pumps.
TCI pumps are not supported
*up to four infusion pumps

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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).

As of August 2015:
Dräger Medical GmbH changes to Drägerwerk AG & Co. KGaA.