Milestones of Anesthesiology: Dräger Perseus A500
New anesthesia workstation for individual requirements

Lübeck – Flexible product design, link with the Infinity Acute Care System (IACS), patients in intensive care, and a level of automation that supports the workflow in the OR: The Perseus A500 anesthesia workstation is one of the largest development projects ever from Dräger. This milestone in the development of anesthesia machines has been introduced by the company for the first time at the World Congress of Anaesthetists (WCA) in Buenos Aires, Argentina.

The patient monitor on the left, right, or centered? With or without medical cockpit for linked IT solutions? Even more storage space? Or advanced clinical functionality? "The development of the Perseus A500 took into account the option for customers to arrange their anesthesia workstation as they like and as it fits their specific situation," says Oliver Rosenthal, director of Dräger's strategic anesthesia business unit.

By users for users
Within the scope of the so-called Customer Process Monitoring (CPM)¹, Dräger specialists have observed anesthesiologists and nurses around the world in their work environment and subsequently interviewed them. "Only during daily use do technology problems reveal themselves," explains Rosenthal. "Our objective was, therefore, to empathize with the user even more intensely than before and to integrate and implement our observations into a concept for new anesthesiology workstations."

The observations have been incorporated into the product design of the Perseus A500. More than 100 different versions of the anesthesia workstation can be created to match the needs of hospitals by combining the different hardware options, shelf arrangements, and storage areas. In addition, freely selectable software options such as ventilator or monitoring modes, increase the number of possible configurations.

¹ Customer Process Monitoring is the observation of actual user processes.
A strong team: Perseus A500 and the IACS

The centralized Perseus A500 15.3" widescreen monitor can be combined with the IACS monitoring system. The IACS consists of the stationary Infinity Medical Cockpit and portable M540 monitoring component.

The Infinity Medical Cockpit imports the anesthesia data from the Perseus A500 and depicits these on a monitor in real time together with the vital signs of the patient. It can be mounted to the side rails as required, either on the left or the right of the device. As soon as the M540 is connected to the Perseus A500, it automatically adjusts its alert behavior to the surgical situation. The anesthesiologist can retrieve from the system a case summary consisting of patient data, surgery time, consumption of anesthetic gases, and equipment data, and save or print this data for further documentation.

Intensive medical ventilation

The quality of ventilation supplied by the Perseus A500 is similar to an intensive care ventilator. The TurboVent 2 turbine ventilator makes it possible for patients to breathe deeply and freely (spontaneous breathing) at all times regardless of the set mode and thus provides particularly gentle ventilation.

The ventilation system of the Perseus A500 features small fresh gas flows (minimal-flow system). The low volume of 2.2 liters in a circulating system and the ventilator control ensures that changes to the gas dosage are delivered quickly to the patient despite the minimal fresh gas flow.

Automation relieves hospital staff

The automated features of the Perseus A500 provide benefits to personnel throughout the hospital - from the anesthesiologist to the anesthesia nurse to the housekeeping staff.

The Perseus A500 features an automatic and self-starting device test and is therefore ready as soon as the OR doors open in the morning. The automatic drying of the breathing system at the end of the day - the so-called "Flush and Dry" function - frees the care staff to do other tasks and optimizes hygiene. RFID (Radio Frequency Identification) technology is used by the device to
remind users of the timely replacement of disposable materials such as the water trap, breathing tubes, and lime scale absorber.

As an ergonomic anesthesia workstation, the Perseus A500 excels with its simple and intuitive usage concept. User interface, nomenclature, and touch screen of the device are in accordance with the operating philosophy of existing Dräger equipment. Users thus become familiar with the device quicker and more easily, the risk of operator error is reduced, and training and education expenditures are lowered as well.

110 years of Dräger anesthesia equipment
In 1902, the "Roth-Dräger" anesthesia machine was already a revolutionary device for achieving a reliably controlled mixture of oxygen and anesthetic agents. The Cicero anesthesia machine, built in the 80's, was the first machine of its kind to feature an integrated patient monitor, device monitor, and ventilator with respiratory system, as well as a dosing unit for anesthetic gases in a single apparatus. Today's devices have become comprehensive anesthesia workstations and ensure not only the exact dosage of anesthetic agents but also provide detailed monitoring of patients and feature intelligent alarm systems. With the Perseus A500 anesthesia workstation, Dräger continues the success story of the company.

Dräger Medical GmbH is the manufacturer of the Perseus A500. Please visit www.draeger.com/perseus for more information.

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