



Dameca AX500



An intuitive and innovative answer to your anaesthesia challenges

Dameca AX500 anaesthesia machine



Meeting your needs – today and tomorrow

As an expert in anaesthesia care, you are looking to continuously improve safety, enhance the patient outcome, and ensure compliant documentation and monitoring of all OR processes. What's more, you also need to boost operational efficiency and streamline workflows across your department. Dameca AX500 anaesthesia machine is a comprehensive, scalable solution that helps you address these and other imperatives – both now and in the future.

Dameca AX500 is an anaesthesia solution created as a direct response to your challenges, workflows, and clinical and operational objectives. Designed with you and your patients in mind, this innovative system helps you deliver superior anaesthesia and perioperative care.



Key benefits at a glance

- Rich functionality and feature set
- Modular, flexible design that grows to meet your changing needs
- Optional integrated gas module
- Intuitive interface for simple use
- Small footprint for deployment in a wide range of operating environments
- Compact vertical integrated breathing system—IBS
- Easy to clean parts and surfaces
- 90 minutes battery back-up
- 15-inch colour touch screen
- Straightforward configuration, adjustment, and monitoring of critical parameters
- Smooth workflows for enhanced efficiency
- Interfacing with patient monitoring systems

Designed with you – for you

In step with your changing requirements

The Dameca AX500 can be deployed as a standard anaesthesia machine or configured to include more advanced features tailored to your specific requirements – such as additional ventilation options, integrated gas module, data logging capabilities, pendant mounting, integrated patient suction, and communication with patient monitors. What's more, you can add functionality as and when you need to, evolving your Dameca AX500 at your own pace and in line with your facility's growing needs.

Greater space utilisation

The compact Dameca AX500 is suitable for deployment in a wide range of OR environments. Its lean, ergonomic design means it can be operated from a standing or sitting position, making it a versatile solution even where space is limited. The unit's reduced height allows for top mounting of a patient monitor – saving space when it is used as a complete anaesthesia workstation.

Streamlined working, easy cleaning

Flat surfaces, smooth contours, and a small number of parts support easy cleaning and set-up, helping you prepare for the next patient quickly and efficiently.

The integrated breathing system consists of just 13 unambiguous components, allowing for quick disassembly in less



than 60 seconds – and eliminating reassembly errors. Moreover, the table top and the pull-out writing plate provide space for taking notes and documenting key processes. And an LED light lets you illuminate your own workspace without distracting your colleagues.



Reliable and flexible

Extensive ventilation capabilities

The Dameca AX500 delivers extensive ventilation capabilities, making it suitable for deployment with a wide range of patients – from neonates to adults. In addition to pressure-controlled ventilation (PCV) and volume-controlled ventilation (VCV), the Dameca AX500 features synchronised intermittent mandatory ventilation (SIMV), two supported ventilation modes (VSV, PSV), and pressure-regulated volume target (PRVT) for use with your most fragile patients.

The machine is designed for maximum reliability and flexibility. For instance, the CO₂ absorber can be disconnected and exchanged on the fly with no disruption to the procedure. In addition, it features an integrated anaesthetic gas scavenging system (AGSS), a unique fresh gas entry point, supporting rapid alteration of gas concentration, and automatic leakage compensation.

Innovative integrated breathing system—IBS

The compact, vertical IBS combines ascending bellows, CO₂ absorber, and breathing system in a single unit. A mechanical lock fixes the IBS to the anaesthesia machine, which means there is no tubing between the two systems. The tall, slim design of the bellows supports economical fresh gas flow settings and makes it easy and fast to identify even the smallest of leakages. And because the inspiratory and expiratory valves are installed vertically, moisture cannot build up to impact performance. With the unique IBS, tailoring the concentration and flow of fresh gas to your patient case is simple.



Ventilation modes

- Volume-controlled ventilation (VCV)
- Volume-supported ventilation (VSV)
- Pressure-controlled ventilation (PCV)
- Pressure-supported ventilation (PSV)
- Synchronised intermittent mandatory ventilation (SIMV)
- Pressure-regulated volume target (PRVT)

Optional integrated gas module

The Dameca AX500 can be configured with an integrated gas module to monitor O₂, N₂O, CO₂, respiration rate, and anaesthetic agents (with automatic agent identification). The integrated gas module is available in two versions: Platinum, which incorporates a high-end paramagnetic oxygen sensor technology. Argentum, a cost efficient solution based on an O₂ fuel-cell sensor technology.



Peace of mind – for you and your patients

A safe environment

The Dameca AX500 is not only designed for clinical excellence but also for patient well-being. It offers a broad spectrum of features that support safe, and streamlined OR processes. The machine's integrated battery supply allows you to work for a full 90 minutes after a power outage, enabling you to safely deliver manual ventilation and continuous anaesthetic delivery.

A semi automatic self-test verifies that all software, hardware and mechanical components are in full working order before you begin. And should, for any reason, the primary drive gas fail during a procedure, a secondary gas supply automatically takes over. For added assurance, all critical functions can also be operated manually, maintaining patient safety even in an emergency.

A clear view

Your working environment is dynamic, highly complex and fast-paced. So, you value simple, transparent, and intuitive workflows that don't encroach on your precious time. The Dameca AX500 features a user-friendly graphical interface

that supports straightforward operation and gives you a structured, organised view of all critical parameters. A 15-inch, portrait colour touch screen displays all the information you need in easy-to-read, coloured waveforms. Simply touch one of these graphs to drive down to more detail – there are no complicated menus or submenus. Intuitive controls let you adjust the gas flow quickly and easily, and allow you to monitor all settings and measurements with very little effort. In addition, there is a dedicated area of the interface for displaying alarms, giving you rapid insight and helping you take timely action.



Smart connections, increased flexibility

You can deploy the Dameca AX500 as a standalone anaesthesia machine or as part of a comprehensive anaesthetic workstation. Plug and play interfaces to your patient monitoring systems allow smooth data exchange. Plus, interfacing with your anaesthesia information management system supports effective communications and compliant documentation of all processes. Whether you need a basic anaesthesia machine or an advanced, end-to-end solution, Dameca AX500 can fulfil your changing requirements – and support your growing needs.

To learn more about the Dameca AX500 anaesthesia machine or explore additional anaesthesia care solutions from Dameca, visit www.dameca.com for more information.

Simple serviceability

The robust Dameca AX500 anaesthesia machine is built for easy access, supporting hassle-free maintenance. Subassemblies and spare parts can be swiftly removed and replaced when required thanks to simple-to-use, push-in fittings.

The machine's high reliability and stable performance keep scheduled maintenance intervals to a minimum – with just one preventive maintenance inspection every year. Moreover, all diagnostic data including unique error codes are captured and monitored for easier post-event analysis.

Technical specifications

Dimensions (H x W x D)	1397 x 810 x 750 mm
Weight	150 kg. Standard configuration
Screen	15-inch colour touch screen
Battery backup time	90 minutes
Vaporisers	Back-bar for two vaporisers
Integrated breathing system - IBS	Autoclavable Volume 1 L
i-SORB CO ₂ absorber	Capacity 880 g Volume (empty) 1420 mL
Tidal volume	20-1500 ml (in PCV mode 5 - 1500 ml)
Respiration rate	4 to 80 respiration per minute
I:E ratio	3:1 to 1:9.9
PEEP	OFF, 4 to 20 hPa / cmH ₂ O / mbar
Inspiratory pressure	4 to 67 hPa / cmH ₂ O / mbar
AGS System	28-40 L/min
Ventilation measurements	Peak, Plateau, Mean, PEEP, Compliance
Ventilation modes	VCV, SIMV, PCV, PSV, PRVT, VSV, Manual, Spontaneous
Platinum gas module	Automatic detection of five anesthetic agents. Simultaneous display of two agents, CO ₂ , O ₂ , N ₂ O and respiration rate. Paramagnetic oxygen sensor
Argentum gas module	Automatic detection of five anesthetic agents. Simultaneous display of two agents, CO ₂ , O ₂ , N ₂ O and respiration rate. Integrated oxygen fuel-cell sensor

Dameca A/S develops, manufactures and sells innovative anaesthesia machines to the world market and is found in more than 100 countries. Our product portfolio also includes flow meters, suction units, wall panels and other OR/ICU and ward supplies.

Dameca is a company of the Löwenstein Group.

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