



The centrepiece of a complete anaesthesia workstation

IntelliSave AX700 anaesthesia machine

PHILIPS

A slim design with rich functionality



To develop the first Philips-branded anaesthesia machine, we listened to hospital staff from around the world, and added the broad expertise in anaesthesia delivery we have among our research and development, design, and clinical application specialists. The result is the IntelliSave AX700, an anaesthesia machine that is the centrepiece of a complete anaesthesia workstation solution from Philips, with an impressive number of high-end features. This includes support for low-flow and minimal-flow anaesthesia, and extensive ventilation capabilities, all packed in a slim and ergonomic, modern design. You can also opt for additional capabilities, such as advanced ventilation modes like Pressure Regulated Volume Target (PRVT), or special support for neonatal or heart-lung machine (HLM) scenarios. We can offer the option of a built-in Multigas Module to provide the feedback you need, unless you choose to make anaesthesia gas measurements with your patient monitor.



Key advantages

- A platform ready to grow with your personal needs and advances in anaesthesia practice
- A compact, vertically integrated breathing system (IBS) that is easy to disassemble and reassemble for cleaning
- Space-saving design and ergonomic layout
- Touch screen-based user interface for an intuitive and easy operation
- Electronic gas mixer for exact control and display of gas mixtures
- Optional Multigas Module to monitor O₂, N₂O, CO₂, RR, and an anaesthesia agent (with automatic agent identification)
- A high standard of built-in features to support patient safety

Safety first

The IntelliSave AX700 is designed with safety in mind. The built-in battery backup has separate batteries for the user interface, gas mixer and ventilator. This enhances battery use and allows you to continue your anaesthetic delivery for up to 90 minutes, without interruption, even if external power fails. Even without any mains power or batteries, the critical functions are mechanically and pneumatically operated. This means you can manually anaesthetise and ventilate the patient using the vaporisers and an emergency oxygen flow from a pressurised supply. The electronic gas mixer, with a fresh gas flow of up to 20 litres per minute, has a rotameter-like display presenting the flow of O₂ and the air or N₂O mixture. The hypoxic guard function ensures the O₂ / N₂O mix always contains at least 25% oxygen, and cuts off N₂O and sounds an alarm if the oxygen supply fails.



Other safety features include:

- An adjustable, emergency fresh gas flow
- A fresh gas switch to redirect the fresh gas flow to the auxiliary fresh gas outlet for rapid switching between the IBS and an external breathing system
- An external, auxiliary O₂ flow meter for quick availability of supplementary oxygen
- An integrated patient suction unit for immediate access
- A fast, semi-automatic self-test at start-up, to ensure the machine is working correctly

Ventilation capabilities

A wide variety of ventilation modes lets you match the ventilation requirements of patients from neonatal to the elderly. This includes the advanced PRVT ventilation mode, which combines the advantages of pressure-controlled and volume-controlled ventilation, by adjusting the ventilation parameters to protect the patient's lungs from barotrauma while trying to provide the desired tidal volume.



Even for your smallest patients

The optional Neonatal mode combined with PRVT can achieve tidal volumes down to 10 ml and lets you control even these tiny flows in steps of down to 1 ml.

Ventilation modes:

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

Convenience by design

The ease of use starts well before you turn the machine on. The compact size and convenient mobility of the IntelliSave AX700 help it fit even in operating theatres where space is limited. It also helps you keep your workspace tidy with two drawers for user manuals, accessories and other items, and tabletop with integrated side rails and enough space for the anaesthesia record or syringes, and so on. It even has its own LED light you can adjust to illuminate the writing surface – or other points of interest – without distracting the surgeon.

Despite its slim design, the IntelliSave AX700 includes several key functions as standard, such as the AGSS for gas evacuation. These remove the need to have separate systems beside or behind the machine.

The IntelliSave AX700 anaesthesia machine can be delivered with a back bar for either Selectatec- or Draeger-style vaporisers, so you can reuse your existing vaporisers. It also has mounting interfaces for patient monitors and a second display (for example, for a second monitoring display or an anaesthesia information management system display), to add flexibility without adding unnecessary bulk.



Applying extensive know-how on anaesthesia workflows and the layout of anaesthesia workspaces, we have grouped the controls and indicators for intuitive and fast access. Similarly, the 15" colour touch screen – used to set the anaesthesia machine functions, and to display the settings and measured data (including waveforms, loops, trends, and system messages and alarms) – is structured for easy usability and understanding. The screen also integrates measurements from the optional Multigas Module, which monitors O₂, N₂O, CO₂, respiratory rate, and primary/secondary anaesthetic agents (with automatic agent identification).

Getting to work

Set up is simple too. Forget about time consuming, multiple-tube connections between the anaesthesia machine, breathing system, and patient. Our vertically-integrated breathing system (IBS) combines an ascending bellows, breathing system, and CO₂ absorber in one compact unit. That means no tubing between the IBS and the machine, and only two hoses – for inspiration and expiration – between the IBS and the patient.

The ascending bellows acts as a fast sign of leakage since, rather than drawing in air as hanging bellows do, it gradually collapses if there is leakage. The filling volume of up to 1500 ml provides suitable tidal volumes for adults, paediatrics, and neonates.

The vertical design of the IBS makes it moisture-tolerant. As does the construction of the flow sensor which is insensitive to condensation.



Available in reusable or disposable versions, the i-SORB CO₂ absorber canister lessens the waste of unused soda lime thanks to its flow-optimised design. It even lets you replace the absorber canister while the machine is running, to minimise disruption to anaesthesia delivery.

The volume sensor measures the inspiratory and expiratory flows. It connects to the input at the left of the machine. The placement of the sensor and connection near the patient contribute to an accurate reading, for better patient control.

Once turned on, the ventilator makes control easy by compensating automatically for the fresh gas flow and compliance in the breathing system. The yellow inspiratory and expiratory valves let you quickly check the correct function. The Adjustable Pressure Limiting (APL) valve – located immediately above the manual bag connection – limits the maximum airway pressure in manual ventilation (MAN) and spontaneous breathing (SP).



Easy to own

Smooth surfaces on the IntelliSave AX700 support easy cleaning and are designed to help you get ready for the next patient.

The integrated breathing system, with only 13 components, can be taken apart for cleaning in under 60 seconds. The unambiguous design also prevents reassembly errors.

The ease of maintenance is further enhanced by long intervals for preventive maintenance (once a year) which is possible through the reliability of the system.



Your Anaesthesia Partner

While we continue to support open systems that let you tailor solutions to your needs, with the new IntelliSave AX700 anaesthesia machine, you can now get your complete anaesthesia solution straight from Philips. That is, you can trust your anaesthesia equipment needs to a company renowned for quality, advanced technology, reliability and safety. This not only includes anaesthesia patient monitors, anaesthesia information management systems, and, of course, the anaesthesia machine, but now also offers a single point of contact for sales, training, support, and service.

Philips provides a wide range of anaesthesia-specific IntelliVue patient monitors with anaesthesia-specific features and configurations, and measurement parameters relevant for anaesthesia, like EEG, Bispectral Index (BIS), or Neuromuscular Transmission (NMT). You can mount these monitors to the left of the IntelliSave AX700, to keep cables short, and make it easy to view when attending to the patient.

There are also alternatives for mounting a second display to the right. This could be a second monitoring display. Or it could be our IntelliSpace anaesthesia information management system for decision and documentation support. This can run on a separate PC, or on the integrated PC (iPC) of an IntelliVue MX-series patient monitor.

Of course, all our products integrate closely to become part of a single anaesthesia workplace. A data communication interface (available through the optional SmartLog communication port) lets you include data from the anaesthesia machine with other relevant patient information on the patient monitor display, or to communicate data to other hospital IT systems.



IntelliSave AX700	
Dimensions (H × W × D)	1550 × 810 × 790 mm
Weight	150 kg
Fresh gas flow	Electronic flow meters and flow control Total flow range: 0–20 L/min
Vaporisers	Back bar for two Selectatec- or Dräger-style vaporisers with interlock safety mechanism
Integrated breathing system (IBS)	Condensation insensitive, vertical design Fresh gas introduced after the inspiratory valve
Absorber capacity	Volume 1420 mL. Capacity approx. 880g soda lime
Tidal volume	10 to 1500 ml (PRVT and Neonatal mode) 20 to 1500 ml (VCV)
Respiration rate	4 to 80 bpm
I:E ratio	3:1 to 1:9,9
Electronic PEEP	4 to 20 hPa (cmH ₂ O)
Inspiratory pressure	PCV mode: 4 to 67 hPa (cmH ₂ O) PSV mode: 4 to 50 hPa (cmH ₂ O)
AGSS	30 to 40 L/min
Ventilation measurements	Peak, Plateau, PEEP and Mean Pressure, Patient compliance, Tidal and Minute volume, Spirometry loop
Integrated Multigas Module	Up to 2 agents (with automatic agent identification), CO ₂ , O ₂ , N ₂ O, Respiration rate



Philips is committed to continuous innovation and will extend the IntelliSave platform to grow with your needs.

Solid back up

Philips also has a service portfolio that encompasses a range of customizable service contracts to ensure your equipment continues to meet its performance potential, and with as few interruptions as possible. We also offer value-added services such as training from our clinical application or technical specialists. For more information, please contact your Philips representative.

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