



Akzent

The Anesthesia System for Newborns and Adults

- + Intelligent, intuitive operating concept
- + Integrated, heated ventilation system
- + Ergonomic design
- + Compact, slim shape
- + Graphic monitoring
- + Tidal volumes starting at 10 ml (optional)



Akzent New Features for Improved Performance

As technology progresses and quality requirements continue to rise, so do the demands made on the effectiveness and efficiency of economical and time-saving anesthesiology. With AKZENT, F. Stephan GmbH has developed a modern anesthesia system in which the users' widely differing requirements are met by a single, very compact device. For the sake of process optimization, all operating modes are selectable via a single, centrally located knob, thus permitting not only rapid, but also extremely secure handling. In AKZENT, the hospital is investing in a system able to cover a broad spectrum of not only newborn but also adult anesthesiology needs.



Highlights

The operating concept

Turning a single knob allows the operator to switch between manual ventilation, rebreathing or non-rebreathing systems as well as a supplemental fresh gas outlet.

The ventilation system

A single system for newborns and adults – as a fully integrated and heated unit it possesses a minimum number of tubes and lines.

The design and form

The ergonomic design provides time and cost savings in clinical applications. The compact and slim shape allows optimum utilization of the available space.

The ventilation

AKZENT provides V-CMV, P-CMV and SIMV ventilation modes. These are available to the user under high, minimal and low flow conditions.

Anesthesia



The reason behind the single-knob operating concept
Anesthesia systems are employed under a wide variety of conditions and shifting demands on ventilation systems. Application conditions in operating theaters equipped with the latest technology require precise ventilation and anesthesia strategies while surgery under less than perfect conditions requires that the anesthesia system exhibit greater flexibility. Changeovers involving the vital ventilation system – e.g., replenishing the depleted soda lime – demand increased attention on the part of the anesthesiologist and may necessitate an additional retrofit to the system.

AKZENT supports the anesthesiologist in these tasks!

Turning a single knob allows the operator to switch between manual ventilation, rebreathing or non-rebreathing systems as well as a supplemental fresh gas outlet. This allows for the user to get greater precision in the control of the anesthetic process and a more flexible reaction to unexpectedly changing conditions.

Thanks to the single-knob operating concept, AKZENT does away with any changeovers or alterations to the ventilation system. The anesthesiologist can concentrate fully on the optimum anesthetic procedure and on the patient.

Akzent The Anesthesia System with the Intelligent Operating Concept



Single-knob operation in practice

Anesthesia is initiated from the standby position by turning a single knob to start manual ventilation. After successful intubation, mandatory ventilation can be initiated by turning the knob to start either the rebreathing or non-rebreathing system. The desirably rapid termination of anesthesia at the end of the surgical procedure is supported by directly selecting the manual ventilation mode or the non-rebreathing system to quickly flush the accumulated anesthetic from the patient.

Employment of the one-way, non-rebreathing system (Magill, Bain etc.) requires no technical modifications and is accomplished with a few, simple adjustments – connection of the tubing system to the fresh gas outlet and selection of the appropriate switch setting.

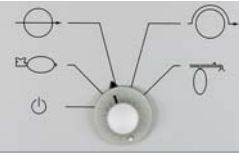
Integrated, heated ventilation system

The design of the ventilation system for newborns and adults utilizing a minimum number of tubes and lines makes a major contribution to patient safety.

The microprocessor-controlled, pneumatically powered bellows-in-bottle respirator permits problem-free alteration between pressure- and volume-controlled ventilation.

In addition, the AKZENT anesthesia system offers automatic system compliance and fresh gas compensated and, in the V-CMV mode, also provides leakage compensation.

Anesthesia



Intuitive operation

Today, operators of modern anesthesia systems no longer demand merely a high level of technical performance, but also intuitive operation and precise parameter and exact alarm adjustment – all these features make AKZENT a user-friendly and advanced anesthesia system.

By concentrating on the essential operating elements, reducing the complexity by means of clearly structured menu guidance and ensuring the rapid adjustment of ventilation parameters through direct key selection, it has never been easier to optimally adapt an anesthesia system to a given set of requirements and circumstances.

Integrated monitoring

The integrated, clearly laid out electroluminescent display (EL) allows the defined ventilation parameters to be easily evaluated in relation to the monitored parameters (numeric/graphic). All process-related data are available at a glance.

The goal is to allow the user to quickly and efficiently make a clear evaluation and to thus optimize patient safety.

Monitoring of the gases (in- and expiration) is possible either via an integrated anesthetic gas module with automatic anesthetic gas detection or by means of an external monitoring system.



Akzent

The Anesthesia System with the Ergonomic,
Compact Design



Ergonomic, compact design

AKZENT can be set up on a cart, connected to a ceiling pendant or be operated as a wall-mounted unit; whatever the situation demands. With its compact, ergonomic design, AKZENT flexibly and ideally adjusts to any minimum spatial relationships.

Reduced costs through time savings

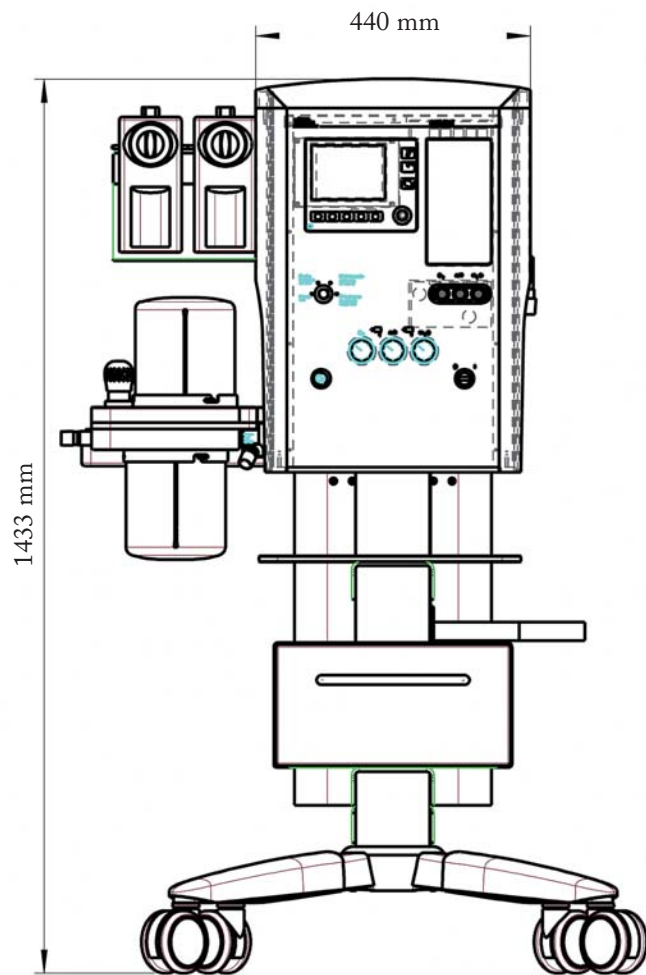
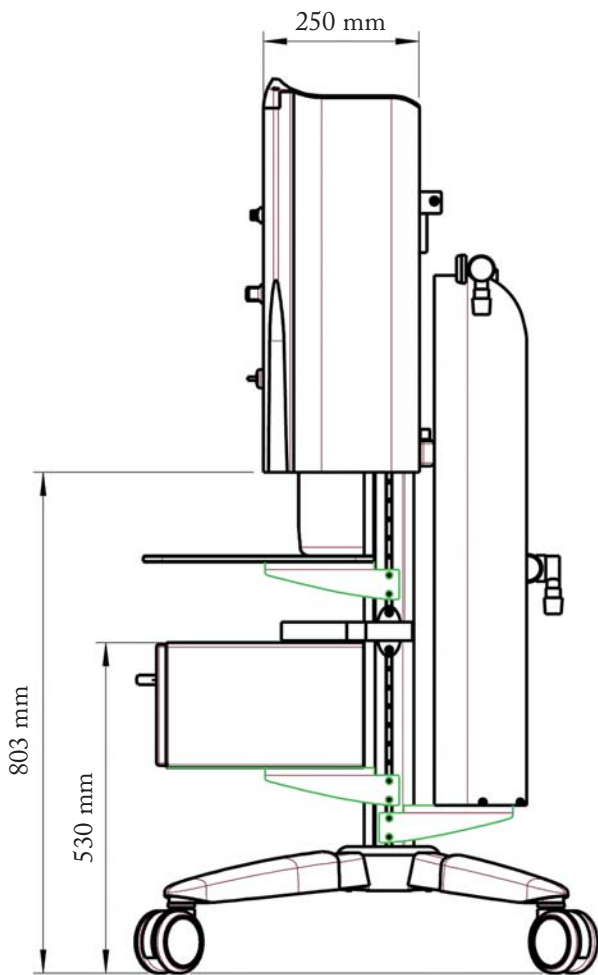
The costs of health care already play a significant role today, and this significance will only increase in the future. Simplifying complex procedures represents an active contribution to the reduction of costs in day-to-day clinical practices. A reduction of surgical time, a more economical management of anesthetics and simplified handling were all major considerations that went into the design of the AKZENT.

Accessories and equipment

As part of the line of accessories for the AKZENT, F. Stephan GmbH offers practical supplementary components such as writing surfaces, drawer units, gas bottle holders and much more.

Equipment features	AKZENT w./o. anesthetic gas module	AKZENT w. anesthetic gas module
Anesthetic gas measurement	n.a.	standard
Automatic anesthetic gas detection	n.a.	optional
N ₂ O (ratio system, N ₂ O block)	optional	optional
Electrochemical O ₂ cell	standard	optional
Paramagnetic O ₂ cell	n.a.	optional
External PNT	optional	optional
High pressure O ₂ gas bottle connection	optional	optional
High pressure N ₂ O gas bottle connection	optional	optional

Anesthesia





Clinical Experience
Technical Competence

Akzent

Technical Specifications

General specifications	
MPG class	II b
Dimensions	
Wall-mounted unit	740 x 770 x 240 mm (WxHxD)
Mobile unit	740 x 1400 x 240 mm (WxHxD)
Weight	
Wall-mounted unit	45 kg
Mobile unit	65 kg
Power supply	
Mains	90-240 V AC, 50-60 Hz, 110 VA
Battery	12 V DC, approx. 2 hr.
Optional	approx. 30 min. with Anesthetic gas measurement module
Gas supply	
AIR	3 - 6 bar + 0,5 bar
O ₂	3 - 6 bar + 0,5 bar
Optional	
N ₂ O	3 - 6 bar + 0,5 bar
Ventilation system	
Bellow-in-bottle system	
Automatic connection	
Heated	
Dimensions	320 x 410 x 230 mm (WxHxD)
Weight	7 kg (w./o. soda lime)
Absorber volume	2.4 l
APL valve	0 ... 70 cmH ₂ O
Operating modes	
Fresh gas and system compliance compensated	
Manual	Hand ventilation
Closed	Closed system
Open	Open system
FG out	Additional fresh gas outlet
Ventilation modes	
V-CMV	Pressure curve: linear, square wave Leakage compensation
P-CMV	Pressure curve: linear, square wave
SIMV	
Parameters	
Measuring tubes	
AIR	0 ... 15 l/min
O ₂	Fine: 0 ... 2 l/min Coarse: 2 ... 15 l/min
Optional	
N ₂ O	0 ... 15 l/min

Parameters	
Operating unit	
Tidal volume	70 ... 1500 ml
Optional	10 ... 150 ml (with PNT Type C)
Ventilation frequency	5 ... 80/min
I:E ratio	3:1 ... 1:3.3
Pmax	5 ... 70 cmH ₂ O
PEEP	0 ... 20 cmH ₂ O
O ₂ - Flush	ca. 35 l/min
Monitoring	
Display	EL, 120 x 90 mm
Pressure	Ppeak, Pmean, Ppeep
Volumes	MV, VTe
Gases	FiO ₂
Optional	FiCO ₂ , EtCO ₂ FiAGA*, EtAGA*
	*AGA: N ₂ O, Sev, Des, Enf, Iso, Hal
Ventilation frequency	
Graph display	P (t), V'(t) scaling
Optional	CO ₂ (t)
Bar display	P (t), VTe scaling
Monitoring	
Alarms	visual, audible Clear text
Pressure	PAW, PEEP
Volume	MV, VTe
Gases	FiO ₂ Low O ₂ signal
Optional	FiCO ₂ , EtCO ₂ FiAGA*, EtAGA*
	*AGA: N ₂ O, Sev, Des, Enf, Iso, Hal O ₂ ratio system N ₂ O block
Data outputs	
RS232	
Sensors	
Flow/volume	Pneumotachograph internal PNT up to 160 l/min
Optional	Type C up to 22 l/min
FiO ₂	Electrochemical O ₂ cell
Optional	Paramagnetic O ₂ cell