

Technical specifications

Volume-controlled intermittent mandatory ventilation (IMV)	
Tidal volume - V _{Ti}	20 – 1600 ml (optional 3 - 1600 ml)
Ventilation frequency	4 – 80 1/min (optional 4 - 100 1/min)
I/E ratio	1:4 - 4:1 (0.1 increments)
PEEP	OFF, 1 – 20 mbar
Plateau	OFF, 10 – 50 % (10 % increments)
Pressure limit P _{MAX}	10 – 80 mbar
Synchronized volume-controlled intermittent mandatory ventilation (S-IMV)	
Tidal volume - V _{Ti}	20 - 1600 ml
Inspiration time T _{INSP}	0.2 - 10 s
Ventilation frequency	4 - 60 1/min
PEEP	OFF, 1 – 20 mbar
Plateau	OFF, 10 – 50 % (10 % increments)
Pressure limit P _{MAX}	10 – 80 mbar
Trigger threshold	0.1 - 10 l/min
Pressure-controlled ventilation (PCV)	
Ventilation frequency	4 - 80 1/min (optional 4 - 100 1/min)
I/E ratio	1:4 - 4:1 (0.1 increments)
Plateau	10 – 90 % (5 % increments)
Ventilation pressure P _{INSP}	5 – 60 mbar
Leakage	To DIN EN ISO 80601-2-13 < 150 ml/min at 30 “Pa × 100” (“mbar”)
PEEP	OFF, 1 – 20 mbar
Synchronized pressure-controlled ventilation (S-PCV)	
Ventilation frequency	4 – 60 1/min
Inspiration time T _{INSP}	0.3 – 10 s (adults) 0.2 – 2.9 s (children)
Plateau	10 – 90 % (5 % increments)
Ventilation pressure P _{INSP}	5 – 60 mbar
PEEP	OFF, 1 – 20 mbar
Trigger threshold	0.1 - 10 l/min
Pressure-supported spontaneous breathing (PSV Assist)	
PEEP	OFF, 1 – 20 mbar
Trigger threshold	0.1 - 10 l/min
Backup	4, 6, 8, 10, 15, 30, 45 seconds

Manual ventilation	
Manual ventilation bag	Manual ventilation is performed using the manual ventilation bag which serves as a reservoir.
Safety devices	
Minimum O ₂ concentration	Electrical control of fresh gas supply so that an O ₂ /N ₂ O gas mixture cannot contain an O ₂ concentration of less than 25 %. Fresh O ₂ gas (100 %) of at least 200 ml/min is guaranteed (except for HLM)
Safety valves	Valves with adjustable pressure relief Automatic safety valve which prevents hazards due to excessive pressure Automatic safety valve which prevents hazards due to excessive negative pressure
Monitoring	
Pressure	-10 to 100 mbar (peak, mean, PEEP, plateau, CPAP)
Tidal volume - V _{Ti}	0 - 5000 ml
Minute volume	0 - 50 l
Frequency	0 - 150 l/min
Flow	-200 to 200 l/min
Lung functions	C20/C Static compliance Resistance Loops
O ₂ monitor	Measured paramagnetically or using a fuel cell On inspiration/expiration
CO ₂ monitor	CO ₂ concentration on inspiration/end-tidal
N ₂ O monitor	N ₂ O concentration on inspiration/end-tidal
Anesthetic gas monitor	Measurement by infrared spectrometry on inspiration/end-tidal - halothane, enflurane, isoflurane, sevoflurane and desflurane
Automatic gas type detection (Auto ID)	Optionally with and without automatic gas type detection
MAC	Determination of minimum alveolar concentration
Interfaces	Serial: COM1, COM2 Optionally: Philips VueLink/IntelliBridge, HL-7
Update option	
Neo mode	Volume guarantee for PCV Tidal volume: 3 - 600 ml Frequency: 14 - 100 l/min

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Leon plus

Tried and tested. Reliable. Intuitive.



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Discover more about Leon plus



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Your anesthesia assistant. Familiar. Safe.

Today’s anesthesia workstations have to do more than just perform technically - they are also required to provide optimized, reliable platform concepts which fully integrate in existing processes and the working environment smoothly and can also be individually configured.

The Leon plus personal anesthesia assistant provides an ergonomically tried and tested, reliable design and hygiene concept for your daily routine. Leon plus takes a familiar, safe and intuitive approach to supporting your work perfectly - whether this is in induction, in the operating room, during diagnosis or used with other relevant hospital systems.

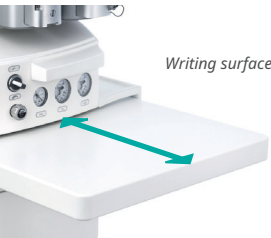


Technical specifications

Basic data		Circuit system, breathing system	
Dimensions (H x W x D)	Leon plus		
	Basic weight 145 kg (with anesthetic vaporizer)		
	Cart: 140 x 92 x 67 cm		Fresh gas-decoupled and heated circuit system
	Cart with 4 antistatic casters		Complete with absorber container (can be replaced during operation)
	All casters can be locked		Measurement of flow on inspiration and expiration, decoupled APL [adjustable pressure limiting]
Fitting to a wall	Central brake for all 4 casters (optional)		
	Minimum clearance width: 70 cm		
	Extending writing surface: 45 x 31 cm (W x D)		
	3 drawers: 14 x 27 x 30 cm		
Suspended ceiling mounting	Optional		
Ambient conditions (during operation)		CO ₂ absorber	
Ambient temperature	+15 °C to +35 °C	Absorber	Can be equipped with disposable or reusable absorber as an option Leonsorb plus and Leonsorb premium disposable absorber (can absorb over 150 liters CO ₂)
Relative humidity	20 % to 80 %, no condensation	APL [adjustable pressure limiting] valve	
Air pressure	700 - 1060 hPa	Setting range	Spontaneous breathing (SP) and adjustable ventilation pressures up to at least 80 Pa x 100 with perceptible ratchet action, rapid venting
Electromagnetic compatibility		Anesthetic vaporizer connections	
Meets standard	EN 60601-1-2	Connection type	Selectatec® or Dräger-compatible vaporizer connections for 2 Inter-Loc-compatible anesthetic vaporizers
Power supply voltage/ power supply		Suction and gas outlet	
Power supply voltage	100 - 240 V (AC), 50/60 Hz	Suction	Optionally: Air suction (injector principle) or vacuum suction
Auxiliary sockets	4 off, 2 x T 2 A fuse each	Gas outlet	Optionally: External fresh gas outlet or O ₂ outlet
Battery running time	> 100 min. (with fully-charged batteries)	Anesthetic ventilator	
Gas connections		Ventilator	Pneumatically driven and electronically controlled, suspended bellows, pressure-limited, compliance-compensated
Number, type	Connections for gases from the central gas supply system for O ₂ , N ₂ O and AIR; optionally without N ₂ O	Screen	15" TFT display, color, touchscreen
	Reserve gas cylinder connections for O ₂ and N ₂ O	Graphical visualizations	Selection for visualizations of 4 real-time graphs simultaneously, complete data management with trend display
	Pressure of the reserve gas cylinders displayed	Graph visualization	Pressure, flow, volume O ₂ , CO ₂ , N ₂ O Anesthetic (volatile anesthetics) optionally with or without ID
	Integrated vacuum source for bronchial suction with vacuum display		2 volume-controlled modes (IMV, SIMV) 2 pressure-controlled modes (PCV, S-PCV) 1 pressure-controlled/flow-controlled mode (PSV) Optional: HLM mode
Supply pressure	Cylinder supply pressures monitored with an on-screen display (10 l cylinders)	Ventilator settings	1 manual ventilation/spontaneous breathing (MAN/SPONT) 1 monitoring (MON)
Connection type	2.8 - 6.0 kPa x 100 (bar)	Flow on inspiration	Max. 180 l/min
Gas control, gas mixer, etc.			
Fresh gas generator	Electronic mixer for 3 gases		
	O ₂ setting range 21 – 100 vol. %		
	for N ₂ O as carrier gas 20 – 100 vol. % (ratio system)		
	100 % O ₂ for fresh gas flow = 200 ml/min		
	Screen display used to select gas mixture and flow setting		
	Compatible with low and minimal flow		



Anesthetic gas vaporizer



Circuit system