LÖWENSTEIN
medical

Leon mri

Technical Specifications

Basis data, weight, dimensions

Chassis	Cart with 4 antistatic rollers
	Central brake for all 4 rolles
	Basic weight approx. 145 kg (with anaesthetic vaporiser)
	Dimensions (H x W x D) 140 x 92 x 67 cm
	Minimum clearance width= 70 cm
	Pull-out writing shelf (W x D) = 31 x 31 cm
	3 drawers (H x W x D) 14 x 27 x 30 cm

Ambient conditions (during operations)

Ambient temperature	+15 °C to +35 °C
Relative humidity	20 % - 80 %, non-condensing
Air pressure	700 - 1060 hPa

Electomagnetic compatibility

Complies with standard	EN 60601-1-2

Mains voltage / power supply

Mains voltage	100 - 240V (AC), 50/60 Hz
Auxiliary sockets	4 units, each with 2 x T 2 A fuses
Battery life	> 100 minutes (with fully charged batteries)

Gas connections

Number, type	Connections for O_2, N_2O and AIR; optional without N_2O
	Reserve gas bottles for O_2 and N_2O
	Display of reserve gas bottles pressure
	Integrated vacuum source for bronchial aspiration with vacuum display
	Monitoring of the supply pressures with display on the screen (10 l-bottles)
Supply pressure	2,8 - 6,0 kPa x 100 (bar)
Connection type	NIST

Gas control,-mixer, etc.

Fresh gas producer	Rotameter block for 3 gases: O_2: 1 - 10 l/min or 100-1000 ml/min N_2O: 1 - 10 l/min or 100-1000 ml/min AIR : 0 -12 l/min Suitable for low and minimal flow Ratio function O_2 > 25 %

Circuit system, breathing System

Circuit system	Fresh gas decoupled, heated
	Complete, with absorber (can be changed during operation)
	Inspiratory and expiratory flow measurement, decoupled APL
Breathing system	All components completely latex-free
Patient connections	22 mm external / 15 mm internal ISO cones

CO_2 absorber

Absorber	Optional with reusable absorber or disposable absorber equipped
	Disposable absorber Leonsorb plus and Leonsorb premium (more than 150 liter CO_2 absorbable)

APL valve

Range	Spontaneous breathing and adjustable ventilation pressure up to at least 80 Pa x 100 with perceptible screening and quick release valve

Anaesthetic vaporizer mounting

Connection type	Selectatec® or Dräger-compatible anaesthetic vaporiser mounting for 2 interlock-compatible anaesthetic vaporiser

Suction and gas outlet

Suction	Available with either air suction (injection principle) or vacuum suctiong
Gas outlet	Available with either external fresh gas outlet or O_2 outlet

Anaesthetic ventilator

Ventilator	Pneumatically driven and electronically controlled, hanging bellows, pressure-limited, compliance-compensated
Screen	12,1“ TFT Display, colored, Touchscreen
Graphics	Selection of display of 4 real-time charts at the same time, complete data management with trend display
Real-time graphs	pressure • flow • volume
	Optional: O_2, CO_2, N_2O
	Anaesthetic gases with or without ID
Ventilator settings	2 volume-controlled ventilation modes (IMV, SIMV)
	2 pressure-controlled ventilation modes (PCV, S-PCV)
	1 pressure/flow-controlled ventilation mode (PSV)
	Optional: HLM-mode
	1 manual ventilation/spontaneous breathing (MAN/SPONT)
	1 monitoring (MON)
Inspiratory flow	Max. 180 l/min

Volume-controlled ventilation IMV

V_{Ti} tidal volume	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 (incremental 0,1)
PEEP	OFF, 0 – 20 mbar
Plateau	OFF, 10 – 50 % (incremental 10 %)
Pressure limitation P_{MAX}	10 – 80 mbar

Volume-controlled synchronised ventilation IMV S-IMV

V_{Ti} tidal volume	20 - 1600 ml
Inspiration time T_{INSP}	0,2 - 10 s
Ventilation frequency	4 - 60 1/min
PEEP	OFF, 0 - 20 mbar
Plateau	OFF, 10 - 50 % (incremental 10 %)
Pressure limitation 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 (incremental 0,1)
Plateau	10 - 90 % (incremental 5 %)
Ventilation pressure P_{INSP}	5 - 60 mbar
PEEP	OFF, 1 - 20 mbar

Pressure-controlled synchronised 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 % (incremental 5 %)
Ventilation pressure P_{INSP}	5 – 60 mbar
PEEP	OFF, 1 – 20 mbar
Trigger threshold	0,1 – 10 l/min

Pressur-supported spantaneous breathing PSV (assist)

Supporting pressure P_{INSP}	5 – 60 mbar
PEEP	OFF, 1 – 20 mbar
Trigger threshold	0,1 – 10 l/min
Backup	4, 6, 8, 10, 15, 30, 45 seconds

Manual ventilation

Breathing bag	Manual ventilation is generated with breathing bag used as reservoir

Safety equipment

Minimum O_2 concentration	Mechanical locking so that in an O_2/N_2O gas mixture, an O_2 concentration of 25 % cannot be exeeded
Safety valves	Valves with adjustable pressure relief
	Automatic safety valve that prevents high-pressure hazards
	Automatic safety valve that prevents low-pressure hazards

Ventilation monitoring

pressure	-10 to 100 mbar (Peak, medium, 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 function	C20/C Static/dynamic compliance Resistance
O_2 monitoring	Inspiratory oxygen concentration (fuel cell)
CO_2 monitoring	Measurement infrared spectrometry inspiratory/end-tidal
N_2O monitoring	Measurement infrared spectrometry inspiratory/end-tidal
Anaesthetic gas monitor	Measurement inspiratory/end-tidal - Halotane, Enflurane, Isoflurane, Sevoflurane and Desflurane
Auto ID	Optional with or without ID
MAC	Establishment of the minimum alveolar concentration
Interfaces	Serial: COM I, COM II Optional: Philips VueLink/intellibridge, HL-7

Upgrade option

Neo-mode	Volume guarantee PCV/S-PCV Tidal volume: 3 - 600 ml Frequency: 14 - 100 l/min

pdb10024en2402

made in GERMANY

Löwenstein Medical
Arzbacher Straße 80
56130 Bad Ems, Germany
T. +49 2603 9600-0
F. +49 2603 9600-50
info@loewensteinmedical.com
loewensteinmedical.com

With people in mind