

LÖWENSTEIN
medical



LUISA

—
Life support ventilation



 With people in mind

Air for an active life. LUISA.

Inhale, exhale – something most people do without giving it much thought. With LUISA, the new, highly efficient ventilator from Löwenstein Medical, ventilated patients can do the same. LUISA is especially mobile, compact and light-weight. It can be operated in a vertical or horizontal position and flexibly attached to a wheelchair or bed. The ventilator's battery has a run time of up to 18 hours, giving the user a larger radius of action and a good feeling of extra security. It's easy to operate LUISA via the 10-inch touchscreen and intuitive menu navigation. Other features simplify everyday use. LUISA provides the air needed for an active, mobile life and opens up brand new opportunities for users.

- **Battery run time** up to 18 hours
- **Display** 10-inch touchscreen
- **Positioning** vertical or horizontal
- **Connectivity:** LUISA App, prisma therapy software (pTS), monitor connection
- **Monitoring:** FiO₂ and SpO₂ measurement
- **Functionality:** ventilation up to 30 ml VT; High-Flow Mode, CPAP and MPV in all circuit systems
- **Safety:** alarm displayed in two languages
- **Uncomplicated:** no adapter, intuitive operation



Technical data

Product class to 93/42/EEC	II b	Mean sound pressure level/operation to ISO 80601-2-72	
Product standards	EN ISO 80601-2-72: Ventilators for medical use – Part 2-72: Particular requirements for basic safety and essential performance of home healthcare environment ventilators for ventilator-dependent patients	<ul style="list-style-type: none"> • at ≥ 500 ml • at ≥ 150 ml • at ≥ 30 ml 	38,5 dB(A) ± 3 dB(A), sound power level 46.5 dB(A) ± 3 dB(A) 37 dB(A) ± 3 dB(A), sound power level 45 dB(A) ± 3 dB(A) 41 dB(A) ± 3 dB(A), sound power level 49 dB(A) ± 3 dB(A)
Dimensions W x H x D in cm	30 x 13 x 21	IPAP pressure range	
Weight	3.8 kg	<ul style="list-style-type: none"> • Leakage circuit • Valve circuit 	4 cmH ₂ O – 50 cmH ₂ O 6 cmH ₂ O – 60 cmH ₂ O
Temperature range		Pressure range leakage system EPAP	4 cmH ₂ O – 25 cmH ₂ O
<ul style="list-style-type: none"> • Operation: • Transport and storage: 	+5 °C to +40 °C -25 °C to +70 °C	Pressure range PEEP valve system	0 cmH ₂ O – 25 cmH ₂ O
Permitted humidity for operation, transport and storage	Relative humidity 10% to 90%, no condensation 35 °C to 70 °C at a water vapor pressure up to 50 hPa	Pressure range CPAP	4 cmH ₂ O – 20 cmH ₂ O
Modes		Respiratory frequency, adult	2 – 60 bpm
<ul style="list-style-type: none"> • Leakage system • Single-circuit with valve system • Double-circuit system 	CPAP, HFT, S, ST, autoST, T, PSV, aPCV, PCV, P-SIMV, V-SIMV, MPVp, MPVv CPAP, HFT, PSV, aPCV, PCV, aVCV, VCV, P-SIMV, V-SIMV, MPVp, MPVv CPAP, HFT, PSV, aPCV, PCV, aVCV, VCV, P-SIMV, V-SIMV, MPVp, MPVv	Respiratory frequency, pediatric	5 – 80 bpm
Air pressure range	700 hPa to 1100 hPa, corresponds to an altitude of 3,000 m above mean sea level	Ti min, Ti max, Ti timed	0.2 s – 4 s (pediatric) 0.5 s – 4 s (adult) auto (Ti timed only)
Maximum air flow at 20 hPa	> 220 l/min	Tidal volume	30 ml – 400 ml (pediatric) 100 ml – 3000 ml (adult)
Display size	10-inch touchscreen	Trigger type	Flow trigger
System interface	3 VDC/0.2 A When connecting the prismaHub device: 24 VDC/0.2 A	Trigger level	auto
Power consumption on standby without battery charging Screen brightness 90%	230 V AC / 0.07 A 48 V DC / 0.30 A 24 V DC / 0.61 A 12 V DC / 1.21 A	<ul style="list-style-type: none"> • Inspiration • Expiration 	1 (high sensitivity) to 10 (low sensitivity) 95% to 5% of maximum flow in 5% steps
Power consumption during ventilation without battery charging Screen brightness 90% Ventilation settings:		Speed of pressure increase adult	Level 1: 100 cmH ₂ O/s Level 2: 80 cmH ₂ O/s Level 3: 50 cmH ₂ O/s Level 4: 20 cmH ₂ O/s
Mode: T Configuration: Adult Leakage circuit, 15 mm Additional accessories: Breathing system filter, WILAsilent exhalation system IPAP: 40 EPAP: 4 F: 26.5 Ti: 1.1 Pressure increase: 1 Pressure reduction: 1 Test lung bag	230 V AC / 0.18 A 48 V DC / 0.81 A 24 V DC / 1.61 A 12 V DC / 2.86 A	Speed of pressure increase pediatric	Level 1: 135 cmH ₂ O/s Level 2: 100 cmH ₂ O/s Level 3: 80 cmH ₂ O/s Level 4: 50 cmH ₂ O/s
Electrical connection, device maximum	48 V DC / 2.7 A 24 V DC / 5.4 A 12 V DC / 7.0 A	Speed of pressure increase MPV mode	Level 1: 60 cmH ₂ O/s Level 2: 45 cmH ₂ O/s Level 3: 30 cmH ₂ O/s Level 4: 15 cmH ₂ O/s
Power supply unit		Speed of pressure reduction (in leakage ventilation only) adult	Level 1: 100 cmH ₂ O/s Level 2: 80 cmH ₂ O/s Level 3: 50 cmH ₂ O/s Level 4: 20 cmH ₂ O/s
<ul style="list-style-type: none"> • Input voltage/maximum current • Input frequency • Output voltage/maximum current 	100 – 240 V AC, 2-1 A 50 – 60 Hz 48 V DC / 2,7 A	Speed of pressure reduction (in leakage ventilation only) pediatric	Level 1: 135 cmH ₂ O/s Level 2: 100 cmH ₂ O/s Level 3: 80 cmH ₂ O/s Level 4: 50 cmH ₂ O/s
Internal/external battery		Tidal volume	30 ml – 3000 ml
<ul style="list-style-type: none"> • Type • Nominal capacity • Nominal voltage • Energy • Typical discharge cycles 	Li-Ion 3200 mAh 29.36 V 93.7 Wh 500 charging cycles	Minute volume (as measured over the previous five breaths)	30 ml – 3000 ml
Operating hours of internal battery assuming following settings: Double circuit, PCV mode, f=20/min, Ti=1 s, PEEP=off, Vt=800 ml Passive lung: Resistance R = 5 hPa/(l/s); Compliance C = 50 ml/hPa	≥ 6 hours	Maximum permitted flow for oxygen supply	30 l/min
Duration of complete battery charge	< 6 hours	Permitted pressure for oxygen supply	< 1000 hPa (< 1bar)
Duration of 80% battery charge	< 5 hours	FiO ₂ measurement range	21% – 100%
Classification to IEC 60601-1-11:		HFT flow range adult: HFT flow range pediatric:	5 – 60 l/min 5 – 25 l/min
<ul style="list-style-type: none"> • Class of protection against electric shock • Degree of protection against electric shock • Protection against harmful ingress of solids and water 	Protection class II Type BF IP22	Fine filter	<ul style="list-style-type: none"> • up to 1 μm • up to 0.3 μm
		Service life of fine filter	about 250 h
		USB flash drive	USB-C 3.1
		Settable alarms	<ul style="list-style-type: none"> • High leakage • Low pressure • High pressure • Apnea • Low volume • High volume • Low frequency • High frequency • Low minute volume • High minute volume • Low FiO₂ • High FiO₂ • Low SpO₂ • High SpO₂ • Low pulse • High pulse • High CO₂ • Low CO₂



LUISA

Accessories

Bacteria and virus filter Teleflex Iso-Gard breathing system filter	WM 27591	Cable, nurse call for LUISA 10 m 30 m	LMT 31510 LMT 31520
FiO₂ measuring cell	LMT 31502	CD-ROM with software prismaTS	WM 93331
Exhalation valve • Silentflow 3 • WILAsilent	WM 25500 WM 27589	USB flash drive	LMT 31414
Leakage circuit • 15 mm Ø • 22 mm Ø • autoclavable, 22 mm Ø • mouthpiece ventilation, 15 mm Ø	WM 29988 WM 23962 WM 24667 WM 27651	COM cable for Philips Intellivue Monitors	LMT 31578
Single circuit • 15 mm Ø • 22 mm Ø	LMT 31383 LMT 31382	Set, 90° circuit adapter	LMT 15984
Double circuit • 15 mm Ø • 22 mm Ø	LMT 31577 LMT 31581	SpO₂ sensor • Size S • Size M • Size L	LMT 31580 LMT 31396 LMT 31388
Mobility bag	LMT 31554	Connecting cable Xpod SpO₂ sensor	LMT 31593
Set, LUISA device plate	LMT 31359	Cable for CO₂ sensor	LMT 31592
Set, LUISA plate for trolley 2.0	LMT 31371	LUISA hospital trolley, consisting of: • Trolley 2.0 (LMT 31355) • Set, LUISA plate for trolley 2.0 (LMT 31371) • Power supply holder (LMT 31351) • Water bag holder (LMT 31353) • Fixing set for oxygen bottles (LMT 31352) • Circuit holder (LMT 31354)	LMT 31370
Mounting bracket for ISO rail	LMT 31368	LUISA homecare trolley, consisting of: • Trolley 2.0 (LMT 31355) • Set, LUISA plate for trolley (LMT 31371) • Power supply holder (LMT 31351)	LMT 31360
Exhalation module • disposable • autoclavable	LMT 31404 LMT 31413	Trolley 2.0 • Power supply holder • Water bag holder • Fixing set for oxygen bottles • Circuit holder	LMT 31355 LMT 31351 LMT 31353 LMT 31352 LMT 31354
External battery	LMT 31540		
Charger for external battery	LMT 31594		
VENTIremote alarm LUISA • 10 m • 30 m	LMT 31560 LMT 31570		

Scope of delivery

LUISA consisting of:	31390-1110
LUISA basic device, LM150TD with HFT	LMT 31410
Protection bag	LMT 31010
Single circuit with valve, 22 mm Ø	LMT 31382
Oxygen connection nozzle	WM 30669
USB flash drive	LMT 31414
Power supply unit	LMT 31569
Power cord (power cable)	WM 24177
Set, 12 fine filters	WM 29652
Set, 2 coarse dust filters	WM 29928
Instructions for use	LMT 68651
Accessories bag	LMT 31579

Please refer to the current price list.

CE 0197



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