

VENTIlogic LS

Life-sustaining home mechanical ventilator for all hose systems

VENTIlogic LS (Life-Support) is an innovative home mechanical ventilator to supplement the NIV therapy devices in our VENTI family. Equipped with an integrated rechargeable battery pack, it can be used for life-sustaining invasive and non-invasive ventilation. VENTIlogic LS, which can also be used as a titration device, permits the use of all hose systems (leakage circuit, single and double circuits with patient valve) and thus covers nearly all indications for invasive ventilation.



Titration

- Settings can be made for all Weinmann devices.
- The following modes are covered with the leakage circuit: CPAP, S, T, ST, TA, SX and SXX.
- The following modes are covered with patient circuits with patient valve: PSV, PCV, aPCV and VCV.

Trigger

- Sensitive flow trigger with artefact suppression
- Lower trigger latency minimizes patient's work of breathing.
- Automatic compensation of ambient air pressure and temperature: The flow measurement is not impaired at all by fluctuations in environmental parameters

Monitoring

- Numeric and/or graphic presentation of pressure, flow and volume
- Average values of all ventilation parameters
- PV and FV loops
- Storage of emitted alarms for analysis of therapy and device settings

LIAM (Lung Insufflation Assist Maneuver)

- Particularly suitable in cases of neuromuscular diseases to support coughing
- Supports secretion mobilization by means of deep insufflation
- Can be used in all ventilation modes – intermittent with ventilation

Blower

- Highly dynamic with a flow of up to 300 l/min
- Very quiet even at maximum pressure (about 28 dB(A) at 10 hPa)

WEINMANNsupport

- Trend analysis and advanced storage functions for therapy with help of SD (Secure Digital) card
- Complete recording of course of ventilation session
- Available soon as update: Online presentation of ventilation parameters (pressure, volume, flow and leakage) on a PC monitor

The bridge between NIV and IV

VENTIlogic LS closes the gap between non-invasive (NIV) and invasive (IV) ventilation. With this device Weinmann supports its partners in providing complete care of their patients. The integrated rechargeable battery ensures reliable and safer operation of the home mechanical ventilator.

The combination of NIV and IV inlets offers a broad range of applications: from support of spontaneous breathing and intermittent self-ventilation to continuous (24 hours per day) life-sustaining ventilation.

Because VENTIlogic LS can be converted from a leakage circuit to a single or double patient circuit with patient valve, nearly all indications for ventilation can be covered, including obstructive, restrictive and neuromuscular diseases.

The VENTIlogic LS therapy device is distinguished by its simple and convenient operation and intuitive user guidance. Thanks to the shared operating concept and similar design of all VENTI devices, all the accessories in the Weinmann home mechanical ventilation product line can also be used with VENTIlogic LS. That simplifies operation and ensures additional safety.



Leakage circuit



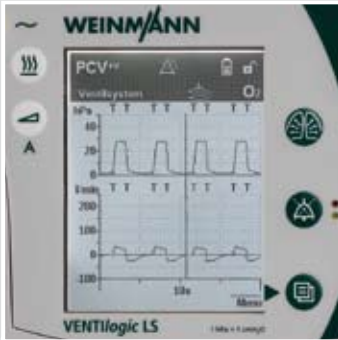
Single patient circuit with patient valve



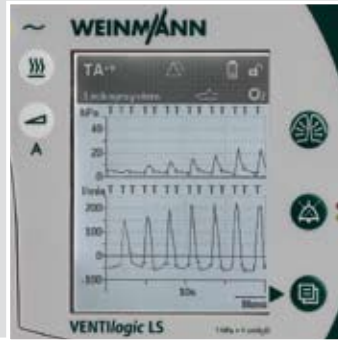
Double patient circuit with patient valve



O₂ measurement set consists of:
O₂ sensor with T-piece and connecting cable



PCV mode, graphic monitoring



TA mode, graphic monitoring



TA mode, numeric monitoring



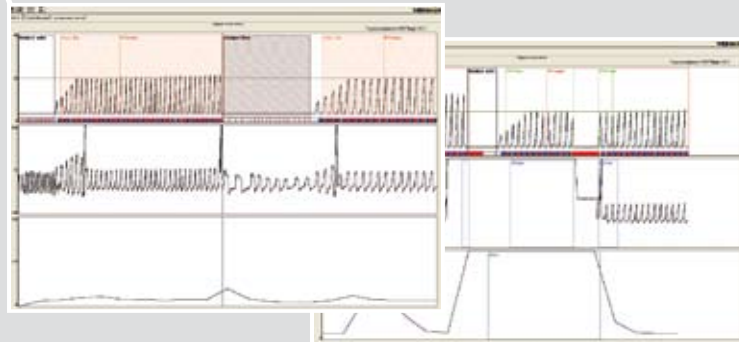
Lung Insufflation Assist Maneuver (LIAM), parameter setting



Lung Insufflation Assist Maneuver (LIAM), graphic monitoring



SD card for storage of therapy data



WEINMANNsupport (Software)



VENTIlogic LS

with leakage circuit WM 27100

- VENTIlogic LS basic device with rechargeable battery, WM 27130
- Power cord, WM 24177
- Protective bag for VENTIlogic LS, WM 27106
- Retrofit set for leakage circuit, packed, WM 15545, consists of:
 - Leakage circuit adapter, WM 27122
 - Drying adapter, WM 24203
 - Leakage circuit, WM 24130
- Info and replacement parts set, WM 15494, consists of:
 - Coarse dust filter, WM 24880
 - Fine filter, packed, WM 15026
 - Coarse dust filter, fan, WM 27759
 - O₂ coupling, WM 27166
 - Patient passport, WM 66810
- User Manual, EN, WM 66802



VENTIlogic LS

with single patient circuit with patient valve WM 27700

- VENTIlogic LS basic device with rechargeable battery, WM 27130
- Power cord, WM 24177
- Protective bag for VENTIlogic LS, WM 27106
- Single patient circuit with patient valve, WM 27181
- Test adapter, packed, WM 27140
- Info and replacement parts set, WM 15494, consists of:
 - Coarse dust filter, WM 24880
 - Fine filter, packed, WM 15026
 - Coarse dust filter, fan, WM 27759
 - O₂ coupling, WM 27166
 - Patient passport, WM 66810
- User Manual, EN, WM 66802



VENTIlogic LS

with double patient circuit with patient valve WM 27710

- VENTIlogic LS basic device with rechargeable battery, WM 27130
- Power cord, WM 24177
- Protective bag for VENTIlogic LS, WM 27106
- Retrofit set for double patient circuit with patient valve, packed, WM 15546, consists of:
 - Expiration module, packed, WM 27185
 - Double patient circuit with patient valve, WM 27182
- Test adapter, packed, WM 27140
- Info and replacement parts set, WM 15494, consists of:
 - Coarse dust filter, WM 24880
 - Fine filter, packed, WM 15026
 - Coarse dust filter, fan, WM 27759
 - O₂ coupling, WM 27166
 - Patient passport, WM 66810
- User Manual, EN, WM 66802

Accessories

- 1 **VENTIpower**
WM 27640
external rechargeable battery
- 2 **Bacteria filter (for leakage circuit)**
WM 24148
- 3 **Bacteria filter (for valve system)**
WM 24476
- 4 **VENTIclick (only for leakage circuit)**
WM 24365
Humidifier
- 5 **O₂ measurement set**
WM 15732
consists of:
 - Connecting cable for O₂ sensor – WM 27792
 - O₂ sensor – WM 27128
 - T-piece, O₂ sensor – WM 27143
- 6 **VENTIremote alarm (10 m)**
WM 27745
- **VENTIremote alarm (30 m)**
WM 27755
- 7 **Connecting cable for nurse call**
WM 27780 (10 m)
WM 27790 (30 m)
- 8 **Leakage circuit**
WM 24130 (can be disinfected)
WM 24120 (can be sterilized)
- **Single patient circuit with patient valve (not shown)**
WM 27181
- 9 **Double patient circuit with patient valve**
WM 27182
- 10 **Analogbox D/A**
WM 27560
- 11 **Power inverter (adapter for car)**
WM 24616
- 12 **Protective bag**
WM 27106
- **Carrying bag (not shown)**
WM 27706
for mobile use of VENTIllogic LS
- **Test adapter, packed (not shown)**
WM 27140
- **WEINMANNsupport RS 232 (not shown)**
WM 93300
- **WEINMANNsupport USB (not shown)**
WM 93305



Technical Data VENTIlogic LS

Product class as per 93/42/EWG:	II b	IPAP pressure range:	6 to 35 hPa (leakage circuit) 4 to 45 hPa (valve system)
Dimensions (W x H x D):	230 x 145 x 340 mm	EPAP pressure range:	4 to 20 hPa (leakage circuit) 0 to 20 hPa (valve system)
Weight:	approx. 6.5 kg	CPAP pressure range:	4 to 20 hPa (leakage circuit)
Temperature range ■ Operation: ■ Storage:	+5 °C to +35 °C -40 °C to +70 °C	Pressure precision:	to 35 hPa ± 0.8 hPa above 35 hPa ± 1.5 hPa
Air pressure range:	600 – 1100 hPa (below 700 hPa leakage is to be kept low because the device may not be able to compensate for high ventilation pressures)	Increment:	0.2 hPa (1 hPa = 1 mbar ≈ 1 cm H ₂ O)
Electrical connection:	115–230 V AC, 50–60 Hz Tolerance -20 %, +10 %	Minimum pressure limit stability (PLS_{min}) (min. pressure in case of device failure):	≥ 0 hPa
Power consumption at ■ Operation: ■ Standby:	230 V 115 V 0.25 A 0.5 A 0.07 A 0.14 A	Maximum pressure limit stability (PLS_{max}) (max. pressure in case of device failure):	≤ 60 hPa
Maximum power consumption:	120 W	Respiratory rate:	5 to 45 1/min
Switching capacity Remote alarm connection:	60 V DC/2A; 42 V AC/2A	Precision:	± 0.2 1/min
Internal rechargeable battery 19.2 V / 3 Ah ■ Capacity at max. load: ■ Capacity at typical loads:	min. 1 hr. Load 1: (IPAP 10 hPa, EPAP 0 hPa, f = 20/min, Ti/T = 40 %, VT = 450 ml, R = 8 hPa/l/s, C = 40 ml/hPa) about 3 h Load 2: (IPAP 20 hPa, EPAP 0 hPa, f = 15/min, Ti/T = 25 %, VT = 795 ml, R = 20 hPa/l/s, C = 75 ml/hPa) about 2.5 h Load 3: (IPAP 30 hPa, EPAP 0 hPa, f = 15/min, Ti/T = 33 %, VT = 1260 ml, R = 15 hPa/l/s, C = 50 ml/hPa) about 1.75 h	Increment:	0.5 1/min
Classification as per EN 60601-1 ■ Protection from electric shock: ■ Degree of protection from electric shock:	Protection class II Type BF	I:E Ratio ■ Inspiration time: ■ Increment: ■ Precision:	20 % to 67 % of breathing period 1 % ± 1 %
Time required for full charge:	approx. 15 hrs.	Trigger level:	Can be set in 8 levels, separate for inspiration and expiration, in ST/PSV mode Trigger for expiration can be disabled
Electromagnetic compatibility (EMC) as per EN 60601-1-2 ■ Radio interference suppression: ■ Radio interference resistance:	EN 55011 EN 61000-3-2, EN 61000-3-3, EN 61000-4-2 to 6, EN 61000-4-8, EN 61000-4-11	Pressure increase speed:	Can be set in 6 levels
Mean sound level/operation as per EN ISO 17510 in patient position at distance of one meter from device	approx. 28 dB(A) at 10 hPa	Pressure decrease-speed ■ Leakage circuit: ■ Valve system:	Can be set in 6 levels One permanently set level
Sound level Alarm:	approx. 69 dB(A) as per EN 60601-1-8	Precision Volume measurement:	at 23 °C: ± 15 %
		Max. allowable flow for oxygen feed:	15 l/ at ≤ 1000 hPa
		Max. heating of respiratory air at 35 °C ambient temperature:	41 °C
		Pressure constancy measured as per DIN EN ISO 17510 in CPAP mode:	< 10 hPa: Δp ≤ 0.5 hPa > 10 hPa: Δp ≤ 1.0 hPa
		Fine filter separation level at 2 μm:	≤ 99.7 %
		Fine filter service life:	1000 hours in normal ambient air
		Allowable humidity Operation and storage:	≤ 95 % rel. humid. (no condensation)
		Flow at max. speed at 0 hPa:	300 l/min (leakage circuit) 280 l/min (single patient circuit with patient valve) 260 l/min (double patient circuit with patient valve)
		Tolerance:	± 15 l/min
		Flow at max. speed with bacteria filter at 0 hPa:	270 l/min (leakage circuit) 250 l/min (single patient circuit with patient valve) 230 l/min (double patient circuit with patient valve)
		Tolerance:	± 15 l/min

3653-01-EN-0908-1 © Weinmann, Hamburg. Duplication of any kind only with the express permission of Weinmann. All rights to design and specification modifications reserved.

■ **Germany** ■ Weinmann Geräte für Medizin GmbH+Co.KG · P.O.Box 540268 · D-22502 Hamburg · Kronsaaßweg 40 · D-22525 Hamburg · E: info@weinmann.de · www.weinmann.de · T: +49-(0)40-5 47 02-0 F: +49-(0)40-5 47 02-461 ■ **Center for Production, Logistics, Service** ■ Weinmann Geräte für Medizin GmbH+Co.KG · Siebenstücken 14 · D-24558 Henstedt-Ulzburg · T: +49-(0)4193-88 91-0 F: +49-(0)4193-88 91-450 ■ **Switzerland** ■ G. Weinmann AG – Neuenhof · T: +41-(0)56-416 41 11 · E: info@ch.weinmann.de · www.weinmann.de ■ **France** ■ Weinmann S.A.R.L. – Paris-Igny T: +33-(0)1 69 35 53 20 · E: info@fr.weinmann.de · www.weinmann.de ■ **Asia-Pacific** ■ Weinmann Medical Technology Asia Co., Ltd. – Bangkok · T: +66-(0)2-7 45 71 70 · E: info@th.weinmann.de www.weinmann.de ■ **Australia** ■ Weinmann (Australia) Pty. Ltd. – Melbourne · T: +61-(0)3-95 43 91 97 · E: info@au.weinmann.de · www.weinmann.de ■ **New Zealand** ■ Weinmann (New Zealand) Ltd. New Plymouth T: +64-(0)6-7 59 22 10 · E: info@nz.weinmann.de · www.weinmann.de ■ **China** ■ Weinmann GmbH+Co.KG (Shanghai Rep. Office) · T: +86 21 32 26 26 98 · E: info@cn.weinmann.de www.weinmann.de