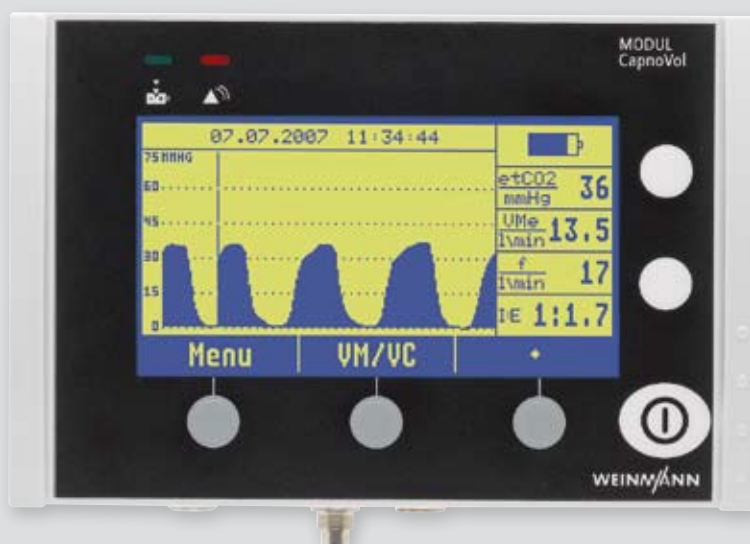


# MODUL CapnoVol

## Ventilation monitoring at the right place

MODUL CapnoVol measures the carbon dioxide content in the patient's exhaled air. This non-invasive method is used for uninterrupted monitoring of ventilated patients, particularly in anesthesiology, intensive care and pre-hospital emergency medicine. In an emergency situation, MODUL CapnoVol provides the doctor and rescue personnel with fast and reliable monitoring of the breathing tube's position. Capnometry also supports direct ventilation management based on end-expiratory carbon dioxide (etCO<sub>2</sub>) measurements. Among other things, the user can see at once the effect of cardiopulmonary resuscitation efforts.



Measurement tube integrated in patient hose system



Clearly laid out connections on bottom of device

The MODUL CapnoVol can be attached directly to the ventilator, so no annoying cables get in the way of monitoring the patient ventilation. Operation is simple and convenient, with a single connection to the patient that incorporates the sensor cable and CO<sub>2</sub> measurement tube on the patient hose system. The monitoring cable can also be directed to the patient via the hose system.

### MODUL CapnoVol Features:

- Large and clear display
- Capnogram display of expiratory tidal and minute volumes, respiratory rate, I:E ratio and CO<sub>2</sub> content of expired air (CO<sub>2</sub> curve)

- Increases safety of ventilation with extensive visual and acoustic alarm functions
- Can be combined with MEDUMAT devices (retrofitting is possible)
- MODUL CapnoVol fits on LIFE-BASE portable systems
- Component of the innovative LIFE-BASE system approach: modular solutions for retrofitting existing ventilators (MEDUMAT Standard, Standard a and Easy)
- Usage data can be stored for later analysis of ventilation process

### Possible combinations on LIFE-BASE portable systems:

LIFE-BASE mini II  
with MEDUMAT Standard a and  
MODUL CapnoVol

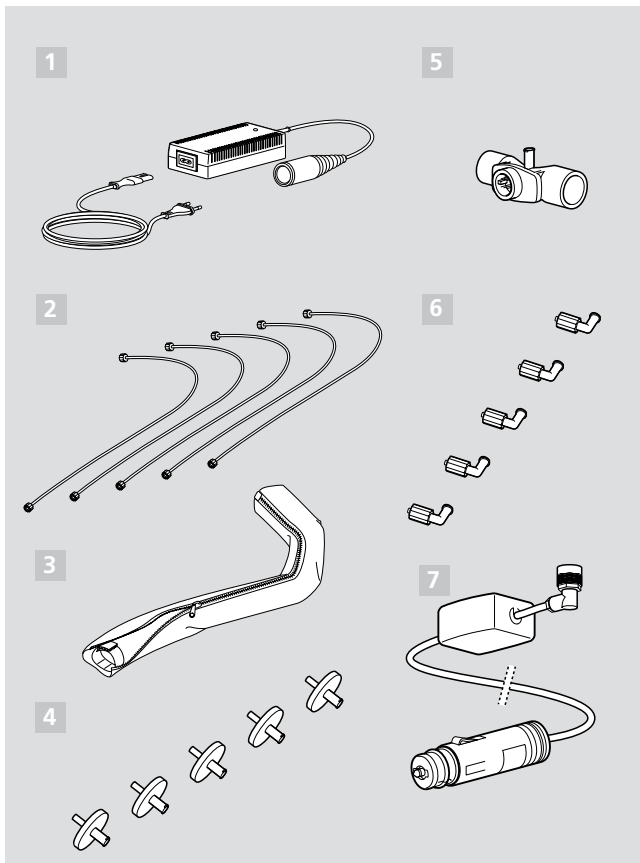
WM 9125



LIFE-BASE III  
with MEDUMAT Standard a and  
MODUL CapnoVol

WM 9115





**Accessories**

- **Electrical outlet (no shown)**  
WM 9107  
For 12-volt power supply (separate from wall mounting) to MODUL CapnoVol, mounted on LIFE-BASE
- **Set of water filters**  
WM 97010  
5 pieces, Ø 25 mm
- **WM 97011 (not shown)**  
5 pieces, Ø 13 mm
- **Power unit and charger**  
WM 2610  
(NATO Stock Number 6515-12-351-3182)  
For 230-volt alternating current
- **BiCheck flow sensor**  
WM 22430  
for MODUL CapnoVol
- **Set of angled adapters**  
WM 15459  
Lüer Lock (10 x WM 22877)
- **Set of CO<sub>2</sub> suction hoses**  
WM 15680
- **Set of IR Adapters (not shown)**  
WM 15681  
With software and holder for MODUL CapnoVol
- **12-V power cord**  
WM 22895  
for MODUL CapnoVol as stand-alone device
- **Protective sleeve**  
WM 8297  
for ventilation hose

Our complete range of therapy solutions, accessories and mask systems is at: [weinmann.de](http://weinmann.de)

**Technical Data MODUL CapnoVol**



<b>Product class as per Directive 93/42/EWG:</b>	Ila
<b>Dimensions W x H x D in mm:</b>	180 x 115 x 90
<b>Weight:</b>	about 1.1 kg
<b>Temperature range</b>	
■ Operation:	0 to +40 °C
■ Storage:	-20 to +70 °C
<b>Air pressure range, operation:</b>	600 – 1060 mbar
<b>Max. altitude for use in uncompensated aircraft:</b>	2500 m
<b>Electrical connection:</b>	12 – 28 V
<b>Degree of protection from splash water:</b>	IP X4
<b>Permitted humidity for operation and storage:</b>	≤ 95% rel. humidity (no condensation)
<b>Norms fulfilled:</b>	EN 60601-1, EN 864, EN 1789
<b>Display:</b>	LCD display blue-white, invertible, with backlighting

<b>Displayed values:</b>	Displayed as
etCO <sub>2</sub> (Vol %, mmHg, KPa)	curve +numeric value
TVexp/ MVexp (in l/ min)	numeric
Rate (per min <sup>-1</sup> )	numeric
I:E ratio	numeric
<b>Operating capacity per battery charge:</b>	about two hours
<b>Time required to charge to 100%:</b>	≤ 90 mins.
<b>CO<sub>2</sub> measurement:</b>	Infra-red photometric process in sidestream process
<b>Volume measurement</b>	
■ Method:	bidirectional hot-wire anemometry
■ Measurement range:	MV: 0–30 l/min TV: 0–2.000 ml
■ Accuracy:	± 15 % of measured value over the entire range
<b>Respiratory rate measurement</b>	
■ Measurement range:	2–60 bpm (breaths per minute)
■ Accuracy:	± 1 bpm
<b>etCO<sub>2</sub> measurement (at 23 °C)</b>	
■ Measurement range:	3–75 mmHg or 0.4–9.9 Vol%
■ Accuracy:	at 0.4–5 Vol% 0.2 Vol% at 3–40 mmHg 2 mmHg at 5.1–9.9 Vol% 6 % of measured value at 41–75 mmHg 6 % of measured value

■ **Germany** ■ Weinmann Geräte für Medizin GmbH+Co.KG · P.O. Box 540268 · D-22502 Hamburg · Kronsaalsweg 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.S. – Paris-Igny T: +33-(0)1 69 35 53 20 · E: info@fr.weinmann.de · www.weinmann.de ■ **Russia** ■ Weinmann SPb GmbH – Saint-Petersburg · T: +7-(812)6 33 30 82 · E: info@ru.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