

# Maintenance - Checklist

## CapnoTrue AMP / ASP / MG



*NOTE: CapnoTrue®AMP/ASP/MG monitors do not require a routine Safety Check - STK (§6) or routine Measurement Accuracy Check - MTK (§11) according to German regulation (Attachment 1 and 2 of MPBetreibV)*

The Handheld capnograph and pulse oximeter CapnoTrue®AMP/ASP/MG with accessories is permanently factory calibrated. The maintenance and calibration-free technology (gas analyzer and SpO<sub>2</sub> Module) integrated in the CapnoTrue®AMP/ASP/MG ensures a robust measurement function throughout the lifetime of the monitor. No routine calibration is required however a basic maintenance plan is highly recommended.

To document the maintenance, use the following checklist. All recommended test steps are described in detail in the document *CapnoTrue Maintenance instructions* and *Service Manual*.

Description of device components	
<b>Device</b>	Device Model (REF on back of label) <input type="checkbox"/> CapnoTrue®AMP (3090112001) <input type="checkbox"/> CapnoTrue®MG (3090112009) <input type="checkbox"/> CapnoTrue®ASP (3090112002)
<b>External power supply</b>	<input type="checkbox"/> black connector at cable and at device (Rev. 1) <input type="checkbox"/> orange connector at cable , metal connector at device (Rev. 2)
<b>SpO<sub>2</sub>-Sensor</b>	<div> <input type="radio"/> SC 6500      <input type="radio"/> SCP 6500      <input type="radio"/> W 6500           </div> <div> <input type="radio"/> SCA 6500      <input type="radio"/> SCPA 6500      <input type="radio"/> Disposable           </div>
<b>Serial number (SN)</b> Of the modules in the device menu: Service Menu> System information > Device information	<b>Device</b> (SN on rear device label):
	<b>SpO<sub>2</sub>-Sensor</b> (SN on cable):
	<b>SpO<sub>2</sub> Module</b> (SN in Service Menu):
	<b>CO<sub>2</sub> Module</b> (SN in Service Menu or on housing):
<b>Firmware Version</b> update at manufacturer is possible starting from v7.5	Version (Startup-Screen at switch on):

<b>Comments</b>		
<b>Result</b>	<input type="checkbox"/> Pass <b>AMP/MG:</b> Step 1 – 5 <b>ASP:</b> Step 1 - 6	<input type="checkbox"/> Fail <b>Don't use device to monitor patients! Perform repair.</b>
Date	Tester	

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SN: \_\_\_\_\_

Test step	Target state	Result	comment
<b>1. Visual inspection</b>			
Housing, Display, Keypad	No damages or defects	<input type="checkbox"/> pass <input type="checkbox"/> fail	
Sensors and cable	No exposed optical components or cables or other damages to the sensor	<input type="checkbox"/> pass <input type="checkbox"/> fail	
external power supply (cable+ connector)	No damages or defects	<input type="checkbox"/> pass <input type="checkbox"/> fail	
Label + transparent protective foil	Label and the transparent protective foil are fixed clean to the back of the device.	<input type="checkbox"/> pass <input type="checkbox"/> fail	
Screw lock	Fixed to upper right-hand screw	<input type="checkbox"/> pass <input type="checkbox"/> fail	
<b>2. Power Supply Options (AA batteries, Li-Poly rechargeable battery, external power supply)</b> (switch on with each supply option >Measurements: SpO <sub>2</sub> at finger; etCO <sub>2</sub> by breathing through airway adaptor > switch off)			
only 4 AA Batteries	switch on> measurement> switch off	<input type="checkbox"/> pass <input type="checkbox"/> fail	
only Li-Poly	switch on> measurement> switch off	<input type="checkbox"/> pass <input type="checkbox"/> fail	
only ext. power supply	switch on> measurement> switch off	<input type="checkbox"/> pass <input type="checkbox"/> fail	
ext. power supply + Li-Poly	switch on > measurement + charging > switch off	<input type="checkbox"/> pass <input type="checkbox"/> fail	
Comments: (Pixel defects, etc.)			
<b>3. SpO<sub>2</sub>-Function at simulator</b>			
SpO <sub>2</sub> at simulator setpoint 82% (BPM or Nellcor curve)	82% SpO <sub>2</sub> (+-2 digits)	<input type="checkbox"/> pass <input type="checkbox"/> fail	value:
Pulse rate at simulator setpoint 75bpm	75 beats/min (+-1 digits)	<input type="checkbox"/> pass <input type="checkbox"/> fail	value:
SpO <sub>2</sub> low alarm	Audible and visual	<input type="checkbox"/> pass <input type="checkbox"/> fail	
Comments:			
<b>4. CO<sub>2</sub>-Measurement (use reference device as alternative means if no breath simulator is available)</b> Select Mode at CapnoTrue: <i>Main Menu &gt; Service &gt; Maintenance &gt; Check gas accuracy</i> Calibration gas (5% ±0.1vol% CO <sub>2</sub> , 20.9% O <sub>2</sub> balance N <sub>2</sub> )			
5vol% CO <sub>2</sub> calibration gas + airway adaptor	EtCO <sub>2</sub> : <b>4.7 – 5.3 vol%</b> FiCO <sub>2</sub> : <b>0.0 – 0.3vol%</b>	<input type="checkbox"/> pass <input type="checkbox"/> fail	value: EtCO <sub>2</sub> / FiCO <sub>2</sub>
Breath per minute	setpoint (+-1 digit)	<input type="checkbox"/> pass <input type="checkbox"/> fail	value:
Comments::			

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Test step	Target state	Result	comment
<b>5. Alarms und Data Download (switch on device, SpO<sub>2</sub> Sensor at finger, breath through airway adapter)</b>			
Remove SpO <sub>2</sub> Sensor from finger	Alarm sound and message „SpO2 Probe off !“	<input type="checkbox"/> pass <input type="checkbox"/> fail	
Breath 3 X through airway adapter and wait 20s	Alarm sound and message „Apnoea !!“	<input type="checkbox"/> pass <input type="checkbox"/> fail	
Download data to PC with CapnoTrue PC-Software	Successful data download to PC	<input type="checkbox"/> pass <input type="checkbox"/> fail	
Delete all data	All stored data in the device are deleted	<input type="checkbox"/> pass <input type="checkbox"/> fail	
Comments:			
<b>6. Check pressure – ISA module (Only for sidestream capnograph CapnoTrue ASP)</b>			
Select at device: <i>Main Menu &gt; Service &gt; Maintenance &gt; Check pressure</i>			
Compare displayed ambient pressure value with the actual barometric pressure value at the local site	actual barometric pressure ±5 kPa	<input type="checkbox"/> pass <input type="checkbox"/> fail	
Compare displayed cuvette pressure with ambient pressure	cuvette pressure is 1 to 5 kPa smaller than displayed ambient pressure	<input type="checkbox"/> pass <input type="checkbox"/> fail	Ambient pr.            kPa  Cuvette pr.            kPa
Comments:			