

COSMOS ALCOHOLTESTER

CA 8120



Operation manual



The breath alcohol testing device...

- for road traffic users
- for work safety
- for medicine

COSMOS
ALCOHOL
TESTER

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These instructions have been prepared with the greatest of care – should you however, when working, find details which do not agree with the system, we would ask that you please inform us briefly so that we can correct the inconsistencies as quickly as possible.

The device

Congratulations on the purchase of this new hand-held alcohol breathalyser. The CA 8120 fulfills almost every demand that can be put to a small and still very economic device.

1. Large colour screen in a blue tint with time of day, temperature and battery-state display
2. Customer specific item number in the C A 8120 start screen
3. Password protected menu navigation in a choice of German – English – French – Spanish - Italian
4. Memory for 2000 measurements with time of day and type (passive / active)
5. Measurement result in a choice of 5 units: % - ‰ - mg/L - g/L – mg/100ml
6. Active or passive measurements
7. Wireless connection to mobile printer
This allows immediate documentation of all measurement results
8. Calibration is easy and fast – can also be done by the customer
Cosmos offers 2 different devices
Request an offer with calibration instruction manual if interested!
9. Calibration and final testing of every device before shipping
10. All mouth pieces have a rebreathing inhibitor to eliminate the risk of transmitting diseases

1. Mouth piece nozzle
2. LED's
3. Exhaust opening
4. Display
5. Power key and "OK" key



6. Selection keys



7. Menu key



8. USB jack



Scope of delivery

This is the condition you will find your C A 8120 in at the time of purchase. The device is calibrated and ready for use.

- Shipment in a sturdy aluminium case with a comprehensive instruction manual
- COSMOS C A 8120 Alcohol Breathalyser
- Belt pouch with zipper
- 25 mouth pieces with rebreathing inhibitor
- 2 AA 1.5 volt batteries
- Printer (only as an option)
- Guarantee for the sensor 6 months (consumable)
- Guarantee for the device 24 months (subject to proper use)
- Unlimited right to return within 2 weeks of delivery



Important information

Threshold limits for impaired driving incapacity vary from country to country. Independent of this, because of different tolerances to alcohol, a blood alcohol concentration of lower than 0.2 – 0.4 ‰ for example can also impair driving and lead to criminal culpability. In Germany, criminal prosecution and a fine can be expected if neurological impairment is 0.30 ‰ or above.

A test with the C A 8120 will not be accepted by the police as evidence, it is nevertheless an important indicator for you to act responsibly. The COSMOS-ALCOHOL-TESTER was calibrated before shipment. To ensure continued correct measurement results, it should be recalibrated every 6 months. To do this, please send the device to you supplier.

The measuring method

Blood and breath alcohol are closely connected. Deep in the lungs, in the alveoli, blood and breathed air are separated by a thin gas permeable membrane. The gas exchange takes place here.

Oxygen passes to the blood and carbon dioxide, and any alcohol, passes to the breathed air.

In order to get this air out of the depth of the lungs (alveolar air) for analysis, a sufficient minimum volume of breathed air must be breathed out.

Only if a sufficient volume of breathed air is breathed out and this is blown with enough strength for at least 4 seconds will a correct measurement be achieved.

CA 8120 Operation

The device for clinics, medical practitioners, medical technology and industry.
With the highest degree of precision and extensive software.

- To turn on, press the  key on the right
- The display shows "**Menu**" and "**Test**"
- To perform a test, press the  key
- "**Please wait**" and then "**Please blow**" appear
- "**Back**" and "**Press**" appear with the result
- Pressing "**Back**" returns you to "**Menu**" and "**Test**"
- The "**Print**" key causes the printer print the result (optional)
- If you would like to perform a new test, press "**Test**"

If you select the "Menu" key, the following appear

Data
Menu
Off

if you select "Menu", you have the choice between

Time
Unit
Pressure
Device number
Limit
Languages
Password
Delete
Temperature
Calibration

By confirming one of these menu items, you can make your individualised settings.

Basic settings at delivery:

Per mille ‰
Temperature in °C
Time of day Germany / EU

Every device is calibrated immediately before shipment.

Shipment is made in a sturdy aluminium case with 25 mouth pieces.

Guarantee for the device 24 months – for the sensor 6 months (consumable)

Subject to proper use.

IMPORTANT:

The test person may not have drunk alcohol within 20 minutes before giving a breath sample. - Otherwise, a false, elevated value will show.

For hygienic reasons and to prevent excessive moistening of the sensor, please use a new mouth piece for every measurement

(Otherwise a complete malfunction of the sensor could result.)

Smoke also damages the sensor.

Do not smoke 5 minutes before a test!

Turning on and off

Turning on: press the  key for approx. 2 seconds

Turning off: confirm "Menu" with the  key and

confirm "Off" with the  key

If no keys have been operated, the CA 8120 turns off automatically after 90 seconds.

Performing a measurement

Active measurement

Turn the CA 8120 on with the  key and press the  key again to confirm "Test".

The initiation of the warm-up mode is indicated by "Please wait".

The CA 8120 then shifts automatically into measurement mode and "Please blow" appears in the display.

Now please place the mouth piece on the mouth piece nozzle and provide a breath sample until the stripe in the display is filled and it "clicks".

After a short time required for the **analysis**, the test result appears in the set unit of measurement. (The unit of measurement can be changed via the menu.

The default setting set in the factory is ‰ per mille.)

For additional measurements, "Back" must be confirmed with the  key. This then brings the start screen back up. "Test" must be confirmed again here with the  key to return to the measurement mode.

Passive measurement

A passive measurement is performed without a mouth piece and is used to check the ambient air or the exhaust air, for example of unresponsive persons.

It only checks whether there is alcohol in the ambient air. A value other than 0.00 indicates that alcohol is present in the ambient air.

Turn the CA 8120 on with the  key and press the  key again to confirm "Test".

The initiation of the warm-up mode is indicated by "**Please wait**". The CA 8120 then shifts automatically into measurement mode and "**Please blow**" appears in the display.

Now hold the device without a mouth piece in front of the mouth of the test person and now confirm "**Passi**" with the  key to perform the passive measurement. The result appears in the set unit of measurement.

Printing following a measurement (optional)

With the appearance of the measurement result in the display, there is the option "**Print**" (print-out of the measurement result). This option is only available if an optional printer is being used.

Data Storage

The CA 8120 can save up to 2000 measurement results. To recall these after turning on the device, confirm "**Menu**" with the **C** key. Using the   keys, select "**Data**" and confirm with the  key. The last measurement appears. Using the   keys, all of the other saved measurements can be recalled.

In addition to the function allowing measurements to be recalled, there is the option "**Print**" which enables printing of measurement results. This option is only available if an optional printer is being used.

Menu Operation

Menu functions can be called up after the device has been turned on.

Confirm "**Menu**" with the **C** key, select "**Menu**" using the   keys and confirm with the  key, then select the desired menu item (from the 10 menu items) using the   keys again and confirm with the  key.

Password protected menu items

A password precedes the menu items. The password set in the factory: **000000** can be changed under the menu item "Password". When the prompt appears requesting the input of the password, using the **→** key, select the password numbers and confirm with the **"Enter"** **↵** key. The **←** key can be used to delete or correct the entered and confirmed numbers.

Menu item: Time

The current date and time can be set. The key **→** is used to bring up the date information to be changed

Day – Month – Year and time information **Hour - Minutes** . The information is changed using the **←** key. Once you have updated the information, confirm and save the updates with the **"Enter"** **↵** key.

Menu item: Unit

This menu item is password protected. Following the correct input of the password, the 5 different units, preceded by highest possible display values, appear:

2,500 mg/l
550 mg/100ml
5,000 g/l
5,000 ‰ BAC
0.500 ‰ BAC

The desired unit can be selected using the **←** **→** keys. The selected unit is then shown in red script and saved with the **"Enter"** **↵** key.

The unit **5.000 ‰ BAC** is preset in the factory.

Menu item: Print *

This menu item is password protected. Following the correct input of the password, the number of print-outs: **1** or **2** or **3** can be selected using the keys **←** **→** .

1 print-out is preset in the factory.

The **"Enter"** **↵** key saves the number of print-outs selected.

* A mobile printer is available as an option
(Item 8200 see order information)

Menu item: Device number

Using this menu item, anyone can input a new 4 digit device number for their device. This new number then appears in the first display in place of the factory set device number when the device is turned on: 8120.

This menu item is password protected. Following the correct input of the password, the desired numbers are selected using the  key. Each number is then confirmed with the "Enter"  key.

The  key can be used to delete or correct the entered and confirmed numbers. Confirming a second time with the "Enter"  key following the selection of the last number saves the new device number.

Menu item: Limit

This menu item is password protected.

It is preset to **0.500 %** in the factory with a warning signal for the respective measurement results.

Please only change if other threshold values apply in the country.

Menu item: Languages

This menu item is password protected. Following the correct input of the password, the following 5 languages appear from which to select:

German

English

French

Italian

Spanish

The desired language can be selected using the   keys. The selected language is then shown in red script and saved with the "Enter"  key.

Menu item: Password

This menu item is password protected. Following the correct input of the password, anyone can input a new 6 digit password. Select the desired numbers using the  key and confirm each number with the "Enter"  key.

The  key can be used to delete or correct previously entered and confirmed numbers. Confirming a second time with the "Enter"  key following the selection of the last number saves the new password.

From this point on, this new password must be input for every password protected menu item.

Menu item: Delete

This menu item is password protected. Following the correct input of the password, the following question appears: **Delete all measurement data?**

If you would like to delete **all** of the measurement data, confirm this with the "Enter"  key. If you do not wish to delete the measurement data, return to the start screen with the  key "Back".

Menu item: Temperature

This menu item is password protected. Following the correct input of the password, the temperature unit can be selected between °F and °C using the   keys.

The "Enter"  key saves the selected temperature unit.

Menu item: Calibration

When this menu item is selected, the last calibration date appears indicating the number of days until the next calibration. The number of days displayed counts backwards 180 days (6 months) from the last calibration.

To ensure the precision of the measurements, the CA 8120 should be calibrated every 6 months – Cosmos Service can do this for you – or you can calibrate the CA 8120 yourself with the Cosmos gas simulators, item 0402 or 0403. (See order information.)

We will be pleased to provide the desired information on request.

Troubleshooting

Fault description	Fault / remedy
The device does not turn on	<i>-No battery in the device or the battery is flat</i>
Device turns off	Check the battery and replace if necessary
	<i>-Batteries are incorrectly inserted</i> Check that batteries are inserted correctly. The poles are engraved on the underside of the device.
Sensor fault	<i>-The sensor is faulty</i> Send the device to the supplier for repair

Please contact Cosmos Service if the faults cannot be corrected.

Caution: Used alkali batteries

- do not throw into fire
- do not charge batteries (risk of explosion!)
- do not use force to open. Risk of explosion!



Only dispose of as toxic waste. Comply with local regulations governing disposal.

For your safety

Please observe the instruction manual exactly and use the device only for the purpose described. As accessories, please only use original parts listed in the spare parts list on page 15.

Repairs may only be carried out by specialists. (Cosmos - Service). Maintenance intervals must be complied with. Liability for the function of the device transfers to the owner or operator if the maintenance is not performed by Cosmos - Service. The manufacturer's warranty conditions apply.

Safety information

- The device is only designed as an alcohol breathalyser and may only be used for this purpose.
- Batteries may not be charged or reactivated and must be kept away from children.
- Medical attention must be sought immediately if a battery is swallowed.
- Only dispose of batteries at official or retail collection points.
- If you no longer want the device, please send it to your supplier. The supplier will ensure for proper recycling/disposal.

Cleaning

Only with a soft, dry cloth. Do not use cleaning agents.

Technical information

Display: 4 digit (0.000 ‰)
Dimensions: W x L x D – 65 x 120 x 30 mm
Weight: approx. 170 g incl. Battery
Batteries: 2 LR6 1.5 volt alkaline
Measurement method: Electrochemical sensor - police standard
Precision: 0,05‰ at 1.00 ‰
Measurement range: 0.00 to 5‰ (0.00 to 2.50 mg/L)
The C A 8120 should be recalibrated every 6 months.

We reserve the right to make necessary technical and optical modifications and improvements without serving notice.

Electrical and Electronic Equipment Act - ElektroG dated 16/03/05

Manufacturers and importers of these kinds of devices are required to dispose of them properly in accordance with statutory provisions. This alcohol breathalyser is a device subject above all to the provisions under § 2 / 8 and 9 of this law for which there is no requirement to make disposal at a public disposal site. – Your supplier would like however to comply with any future ordinances.

Should you no longer use the device - we hope after many years of faithful serve - please return it to us so that we can dispose of it properly for you. - Thank you.

Attachment / RoHS

CA 8120 Instruction Manual

**COSMOS
ALCOHOL
TESTER**

Order information – for the CA 8120

Product	Number	Item no.	Price *
Alcohol breathalyser CA 8120 black Shipment in an aluminium case, with accessories, comprising: 25 mouth pieces, batteries, belt pouch, instruction manual	1 piece	8120	245,00 €
Alcohol breathalyser CA 8140 black Shipment in an aluminium case, with accessories, comprising: 25 mouth pieces, batteries, belt pouch, instruction manual, with mobile printer and accessories	1 piece	8140	395,00 €
Mobile printer for CA 8120 Shipment with accessories	1 piece	8200	195,00 €
Mouth pieces with rebreathing inhibitor 1 = 25 pieces packaged individually	1 piece	0023	to 100 units 0.30 € to 1000 units 0.23 € from 1000 units 0.19 €
Belt pouch for the convenient storage of the device and mouth pieces	1 piece	7202	13,50 €
Aluminium case	1 piece	8201	18,50 €
USB jack For the connection of the CA 8120 to a PC	1 piece		7,50 €
Gas simulator standard for the calibration of of Cosmos alcohol breathalysers with thermometer, bubble humidifier and operating manual	1 piece	0402	120,00 €
Gas simulator exclusive complete with thermostat for constant temp. 34°C, air pump for calibration, flow meter with control and automatic air-flow stop	1 piece	0403	395,00 €
Calibration alcohol solution for Cosmos gas simulators 500 ml with 0.50 ‰	1 piece	0405	15,00 €

* VAT to be added to all prices plus shipping costs, if necessary. Subject to change.



EC - DECLARATION OF CONFORMITY EC - DECLARATION OF CONFORMITY

For the following device:

Name: COSMOS-ALCOHOL-TESTER
Model: C A 8120
Serial no.: 00100 - 02000

We confirm herewith that the design of the above named device conforms with applicable EC guidelines.
The declaration loses its validity if changes are made without authorisation from us.

Applicable EC guidelines:

Emissions	
Radiated emission	EN55022
Interference immunity	
Electrostatic discharge	EN61326-1
Electromagnetic field	EN61326-1
Magnetic field (power-frequency)	EN61326-1

Design model test:

We confirm that our design model conforms with the requirements of the EC guidelines above.

Bad Segeberg 01.06.2010

COSMOS ALCOHOL BREATHALYSER
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