COMPUR Monitors

Compur Dositox - This Gas Detector Measures, Calculates the Exposure and Stores the Data

Compur Dositox - the Egghead – A Gas Detector with Data-logger and Personal Computer Interface

To protect personnel from potential hazards by gas, the concentration of a toxic gas must be measured. Any potentially dangerous substance has a specific toxic impact. Based on these characteristics, threshold limits of allowable concentrations and the total exposure by shift are calculated. These threshold limits are stored in the microprocessor of the Dositox and are continuously compared to the actual gas concentration. When the allowable level is exceeded, the instrument will provide an audible and visual alarm. The datalogger will store the values which can be downloaded to a personal computer for permanent storage and evaluation.

Calculation of the Total Exposure – every 10 Seconds ...

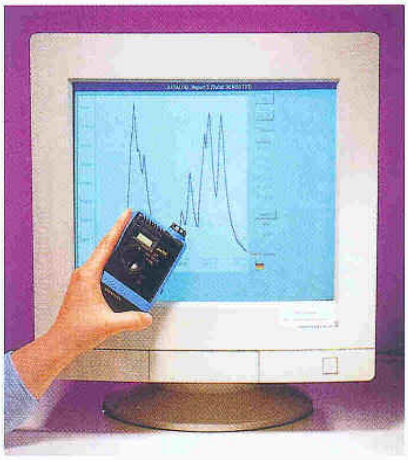
The authorities have published lists with the specific threshold limits for many substances. They distinguish between LTEL (Long-Term-Exposure-Limit) and STEL (Short-Term-Exposure-Limit) values. LTEL is defined as an 8-hour average while STEL is based on a 15 minutes averaging period. None of these values should be exceeded at any time.

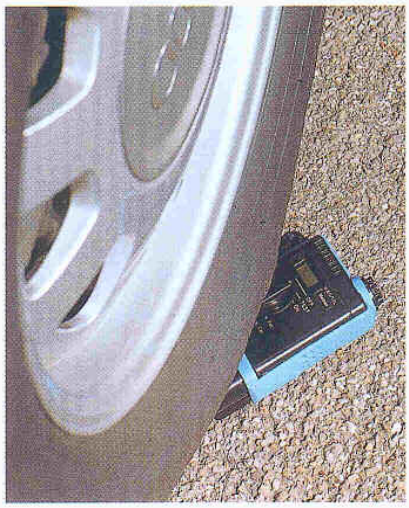
When calculating these average values, it is important to have a high time resolution and the averaging starts once the TLV is exceeded. A fixed time frame could cut a concentration peak, that would have exceeded the STEL, in two halves having an average below the STEL. Therefore, the Dositox is programmed to start an averaging interval whenever the TLV value is exceeded. This allows the best possible exposure determination for increased safety.

Concentrations between LTEL and STEL are only allowed for a certain period of time, depending on the local regulations. Substances- and country specific formulas are stored in the microprocessor of the Dositox so that a concentration profile can be continuously compared to the allowable level in accordance with the local regulations.

Whenever the LTEL and/or STEL is exceeded, the instrument will give a visual and an audible alarm. The built-in datalogger stores a new measurement value every 10 seconds so that detailed concentration profiles can be recorded. This data can be downloaded to any personal computer that operates with Windows software. The evaluation program DATALOG provides three types of reports: a measurement report with all relevant information, a listing of the measured values with a variable time base and a graphic display of the concentration profile versus time including a zooming option.

The Dositox can also be programmed to operate as a gas detector alarming at TLV values with datalogging capability. Even in this mode, the measured values can be evaluated in accordance with the local exposure regulations.

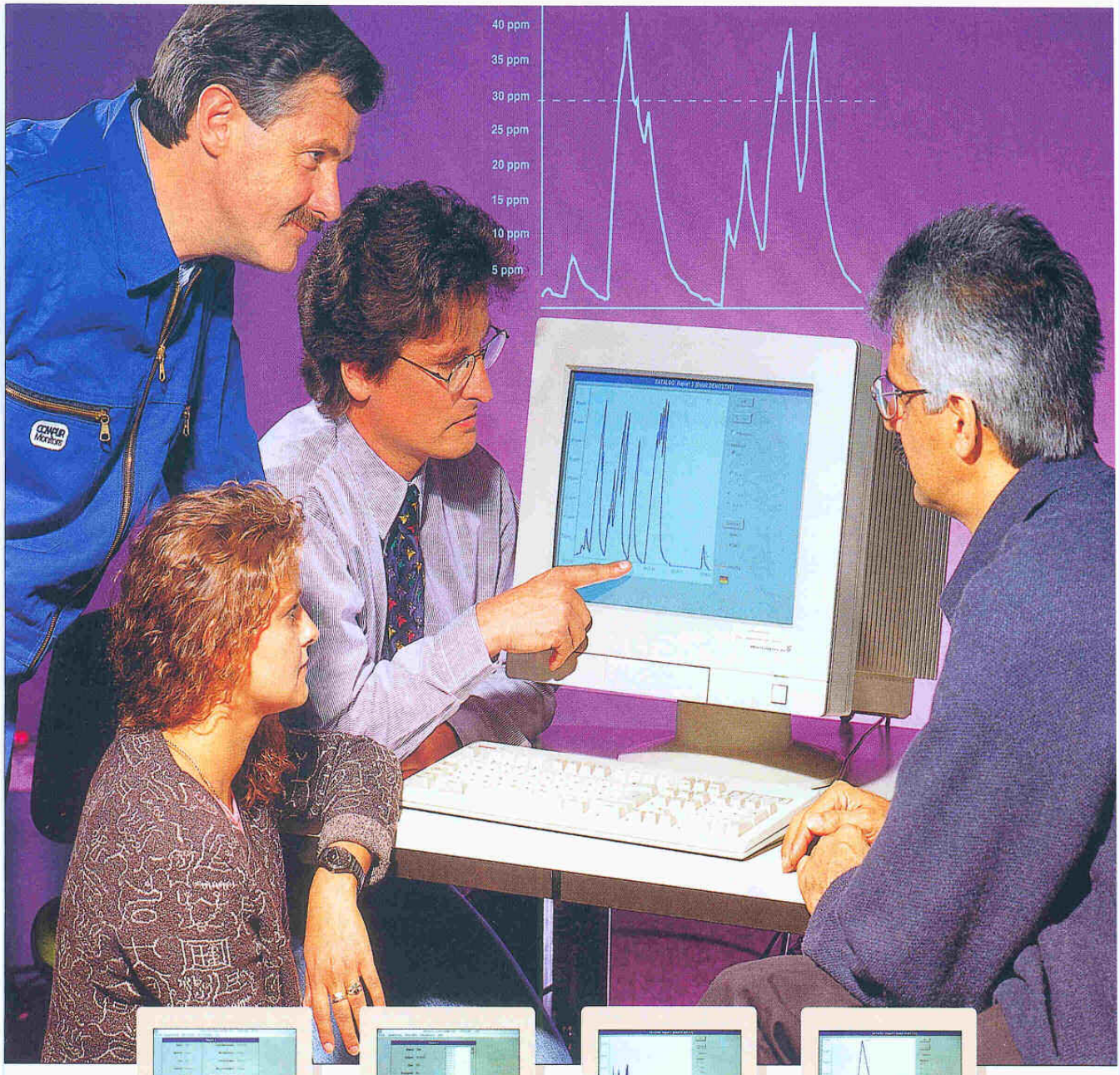




The Dositox and Your Personal Computer – Total Communication

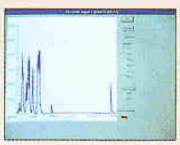
The Dositox has a bidirectional RS 232 C Interface. The interface downloads data from the Dositox and transmits commands and parameters to program the instrument from your PC. The DATALOG software includes an easy-to-use menu and a help text file that details the complete operation of the Dositox and software.

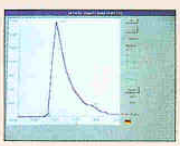
HCN, NO_2, CO, Cl_2, $COCl_2$, H_2S, HCl, AsH_3, PH_3, SO_2, ClO_2, O_2



Dositox set-up

data listing


graphical evaluation


zooming

The Dositox has a built-in serial interface for easy connection to a PC – no extra hardware required

Easy to use – More Safety

The operation of the Compur Dositox is very easy. The on/off switch has three positions (OFF/TEST/ON) and starts the detector and datalogger as soon as it is turned to the ON position. Even if the instrument is switched off, for instance during breaks, the time base for datalogging will keep running to make sure all measured values during a shift are related to the start time. The micro processor automatically stores the start date and time provided by the integrated real time clock (RTC) generator – no manual input is required. This eliminates input errors and prevents manipulations of the measurement.

The TEST position allows access to the push buttons "Function" (Fct) and "Calibration" (Cal). The button "Calibration" activates a calibration routine allowing the user to calibrate the instrument with gas or use a new pre-calibrated sensor to perform an electronic calibration of the instrument. The "Function" button activates the read out of the actual exposure value on the LCD. In this position, you can perform a function test with the Compur gas generator without recording the test peak.

Compur Dositox

- exposure alarm according to local regulations
- built-in datalogger
- visual and audible alarm
- STEL and LTEL measurement
- concentration triggered averaging interval
- DATALOG – a Windows based evaluation program
- detailed concentration profiles
- easy to use
- small and lightweight
- electronic- or gas calibration
- built-in real time clock

Technical Data

Dositox	
Measuring components:	HCN, NO_2, CO, Cl_2, $COCl_2$, H_2S, HCl, AsH_3, PH_3, SO_2, ClO_2, O_2
Measuring range:	typ.: 0–10 MAK
Measuring principle:	electrochemical amperometric sensors
Accuracy:	± 10%
Operation temperature:	–20 °C to +40 °C (–4 °F to +104 °F)
Humidity:	typ.: 20–95% relative humidity
Power supply:	rechargeable NiCd battery pack
Operating time per charge:	18 hours
Datalogger:	max. 12 hours recording time (4320 points at 10 seconds
	averaging interval)
Alarms:	exposure (LTEL/STEL) alarm or concentration (TLV) alarm
Alarming indications:	audible: typ. > 80 dB(A); visual: bright LED
Display:	LCD, four digits
Dimensions:	124 x 65 x 25 mm / 4,9 x 2,6 x 1 in (H x W x D)
Weight:	240 g / 8,5 oz
Connectors:	Earphone
	serial RS 232 C interface
Ex-approval:	EEX ib IIC T6
Protection class:	IP 54
Sensor warranty:	12 months ($COCl_2$, HCl, AsH_3, PH_3, SO_2, ClO_2: 6 months)
Min. system requirement	386 CPU, 4 MB RAM, standard VGA-graphic card, one
for the evaluation	serial interface (COM1-COM4), Windows 3.1x, 95 or NT
program DATALOG:	

Gas Generator	
Power supply:	9 V battery, size IEC 6LR61
Battery operation time:	approx. 800 Tests
Dimensions:	133 x 65 x 40 mm / 5,5 x 2,5 x 1,5 in (H x W x D)
Weight:	250 g (8,8 oz)

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