

## Mercury Tracker-3000 XS

### AIR QUALITY MONITORING

The well-proven Mercury Tracker 3000 IP is now updated.

The new Mercury Tracker-3000 XS weighs even less, it is smaller, easier to handle and features GPS, a 5.7" color TFT display and a new high performance Eneloop battery pack with minimized self-discharge.

### SPECIFIC FEATURES

- Easy to operate
- Real time measurement
- High precision measuring principle: atomic absorption spectrometry (AAS)
- Measuring ranges 0.1-100 / 0-1000 / 0-2000  $\mu\text{g}/\text{m}^3$
- High resolution 0.0001  $\text{mg}/\text{m}^3$
- Data logger integrated, with built-in 4 GB SD card
- Shock proof and corrosion resistant for rugged field operation
- Waterproof keypad and cable connectors
- Additional quick swap Eneloop battery pack (optional)
- GPS



Avoid problems related to mercury contamination !

The Mercury Tracker-3000 XS is a lightweight, compact and rugged instrument with built-in GPS for measuring the mercury concentration in air.



Mercury Tracker-3000 XS: ready for field work with built-in GPS and datalogger.



### MAIN APPLICATIONS

- Safety at work
- Exhaust gas survey
- Environmental monitoring
- Mercury spills screening
- Hazardous waste inspection
- Investigation of contaminated sites
- Investigation of mercury contamination in air
- Measurement of mercury in scientific research

## TECHNICAL SPECIFICATIONS

Measuring principle:	UV absorption (CVAAS), wavelength = 253.7 nm
UV source:	Electrodeless low-pressure mercury lamp (EDL)
Stabilization method:	Reference beam method
Optical cell:	Fused silica (Suprasil) l = 170 mm
Measuring ranges:	<ul style="list-style-type: none"> <li>• 0.1 - 100 µg/m<sup>3</sup> (0.01-10 ppb)</li> <li>• 0 - 1000 µg/m<sup>3</sup> (0-1000 ppb)</li> <li>• 0 - 2000 µg/m<sup>3</sup> (0-2000 ppb)</li> </ul>
Sensitivity:	0.1 µg/m <sup>3</sup> (0.01 ppb)
Response time:	~ 1 second, real time measurement
Alarm:	Exceedance of concentration, 3 levels programmable
Status alarms:	<ul style="list-style-type: none"> <li>• measuring cell soiled</li> <li>• battery state</li> <li>• UV lamp exhausted</li> </ul>
Control pad:	Waterproof membrane keypad
Measurement display:	5.7 inch TFT graphical color display, with LED backlight, (brightness and energy saving switch-off delay adjustable)
Signal outputs:	<ul style="list-style-type: none"> <li>• USB</li> <li>• Bluetooth</li> </ul>
Data storage:	Built-in data logger, internal 4 GB SD-card, automatic time and date stamp, GPS stamp if activated
Software for data transfer:	Mercury Instruments „Hg-Transfer“ included on delivery, export of data: EXCEL® and ASCII format
GPS:	Built-in, receives US-GPS, Galileo, GLONASS and others for increase in positioning accuracy and improved reception
Internal power supply:	Rechargeable 12 V Eneloop batteries with min. capacity of 7 hours and minimized self-discharge, quick swap battery packs as an option
External power supply:	<ul style="list-style-type: none"> <li>• 110 - 230 VAC/50 - 60 Hz; with mains adapter</li> <li>• external 12 V DC sources, (cigarette lighter adapter optional)</li> </ul>
Dimensions (WxDxH):	29 x 14 x 17 cm
Weight:	approx. 2.6 kg (incl. battery pack)

## ANALYTICAL PERFORMANCE



The Mercury Tracker-3000 XS uses a high-frequency driven electrodeless mercury discharge lamp (EDL) as UV source. It generates emission lines of an extremely narrow bandwidth which are congruent with the absorption lines of the Hg atoms to be measured. Cross-sensitivities are thus minimized.

Contrary to gold film based systems, the Mercury Tracker-3000 XS shows virtually no interference to hydrogen sulfide (H<sub>2</sub>S) or water vapor. The extremely high stability of the UV source is a result of the reference detector method which is applied in the Mercury Tracker-3000 XS. Total background noise is less than 0.1 µg/m<sup>3</sup>. To prevent temperature drift both the lamp unit and the detectors are temperature-stabilized.

The instrument is factory calibrated before delivery. The calibration remains stable over a long period of time.

## EASY TO OPERATE

The Mercury Tracker-3000 XS is controlled by menu-guided inputs on a waterproof membrane keypad and a 5.7" TFT graphic display with LED backlight. After switch-on the light source is stabilized (approx. 5 - 10 minutes) and the baseline is automatically adjusted by the auto zero function. Measurement starts automatically, continuously indicating the mercury concentration of the air as a numerical value and a graphic bar.

In case of a malfunction the operator of the Mercury Tracker-3000 XS is warned via messages on the display.



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