

Gas Analyzer

Transportable gas analysis system for measurement and examination of carburizing atmospheres



Transportable gas analysis system for carburizing atmospheres

The analyzer is used to measure and record the gas components CO, CO₂, CH₄ and H₂ in carburizing atmospheres.

The resulting C-level is calculated.

Parallel to the gas analysis, a zirconium oxygen probe for comparative measurements can be connected. The temperature used for the C-level calculation can alternatively be entered on the device. The soot limit is determined by the calculated values and temperature. The carbon transition number „ β ” results from the H₂ and CO measured values.

Functions of software:

Visualization of measurement and calculation values. All values are displayed on the main screen. The required gas analysis, calculations and constant inputs are realized by touching the device foil keyboard.

Data storage of measurement and calculation values: The analysis device is equipped with a data recorder and graphic recorder for measured values and calculation results. The starting and stopping of data recording takes place via the function key.

Alternatively the analysis device can be connected to the ECS process control system. Here an automatic batch import can be configured that copies the completed batches to the PC.

Fields of application:

- Gas analysis carburizing processes

Technical Data

- Measuring range carbon monoxide: 0 ... 50 Vol. %
- Measuring range carbon dioxide: 0 ... 1 Vol. % (optional 0 ... 2,5 Vol. %)
- Measuring range methane: 0 ... 25 Vol. % (optional 0 ... 10 Vol. %)
- Measuring range hydrogen: 0 ... 60 Vol. % (optional 0 ... 100%)
- Calculated C-level: 0 ... 2 % C
- Accuracy of measurement: $< \pm 3$ % relative errors (MBE)
- Resolution: 0.1 Vol. %
- Ambient temperature: 5 - 40 °C
- Heating period: approx. 30 min.
- Moisture content of measuring gas: dry, dust-free
- Withdrawal of gas: integrated filter and flow meter
- Gas flow rate: ca. 5 l/h (integrated pump)
- Measuring speed: < 2 min
- Dimensions / weight: 450 x 180 x 400 (WxHxD in mm) / approx. 12.5 kg

Connections Zirconia Probe

- Temp. Type S / Type K / EMK: 0 ... 1800 °C / 0 ... 1400 °C / 0 ... 2000mV

Options

- Batch logging with recorder function LOG-604
- Batch logging and evaluation on PC LOG-604+AW
- Differential pressure bubble vessel for pressureless withdrawal of gas
- KOH filter for CO2 zero point calibration
- Separate connecting socket for L probe

