

Portable reference analyser for industrial flue gases

testo 360

Today, official emission measurements on industrial flue gases are ideally carried out using a compact, portable analyser of robust design. Advantage: Easy to transport by car and easy to handle.

When monitoring thermal processes, the aim is to maintain and improve quality. Often conditions are extreme with a high gas concentration, dust load, high ambient temperatures and long-term measurements are required.

When monitoring emissions, **testo 360** can determine even extreme values thanks to a switchable measuring range extension and it can withstand high ambient temperatures and radiant heat.

For service on industrial furnaces, total accuracy is required of portable multi-function analysers because of the numerous subsequent emission inspections; the analyser should also be robust to withstand continuous measurements for the optimum adjustment of burners. A high efficiency level and low subsequent costs are also a priority.

- Data logger function for several days or weeks
- Maintenance-friendly design reduces costs

Industrial flue gas inspections require flexible analysers which are easy to transport and correspond to stationary systems in terms of accuracy levels.

testo 360, minimum equipment

testo 360, including notebook with basic software, O₂, CO, NO, NO₂ measuring module, CO rinse, gas preparation unit, housing heating unit, 4.0 m heated hose, filter, basic sampling probe

Germany

The approval for long-term emission measurements was carried out by RWTÜV Anlagentechnik GmbH in Essen, Germany. The NO, NO₂, SO₂, CO and O₂ components were tested. Unlimited approval of **testo 360** for use on TA Luft systems was confirmed.

USA

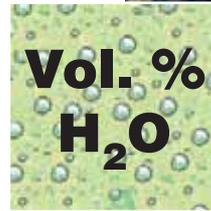
testo 360 meets US EPA's Performance Specifications for measuring NO_x, CO and O₂. Also fulfills CTM-030 and -034 as well as US EPAs 40 CFR, Part 60, App. A and B and Part 75 Subpart C. (**testo 360** is also approved by California South Coast Air Quality Management District for measuring NO_x.)

Russia

testo 360 has GOS standard approval for all parameters.

Switzerland

testo 360 is approved by BUWAL for official emission measurements.



Flue gas humidity measurement



Approved for continuous emission measurements

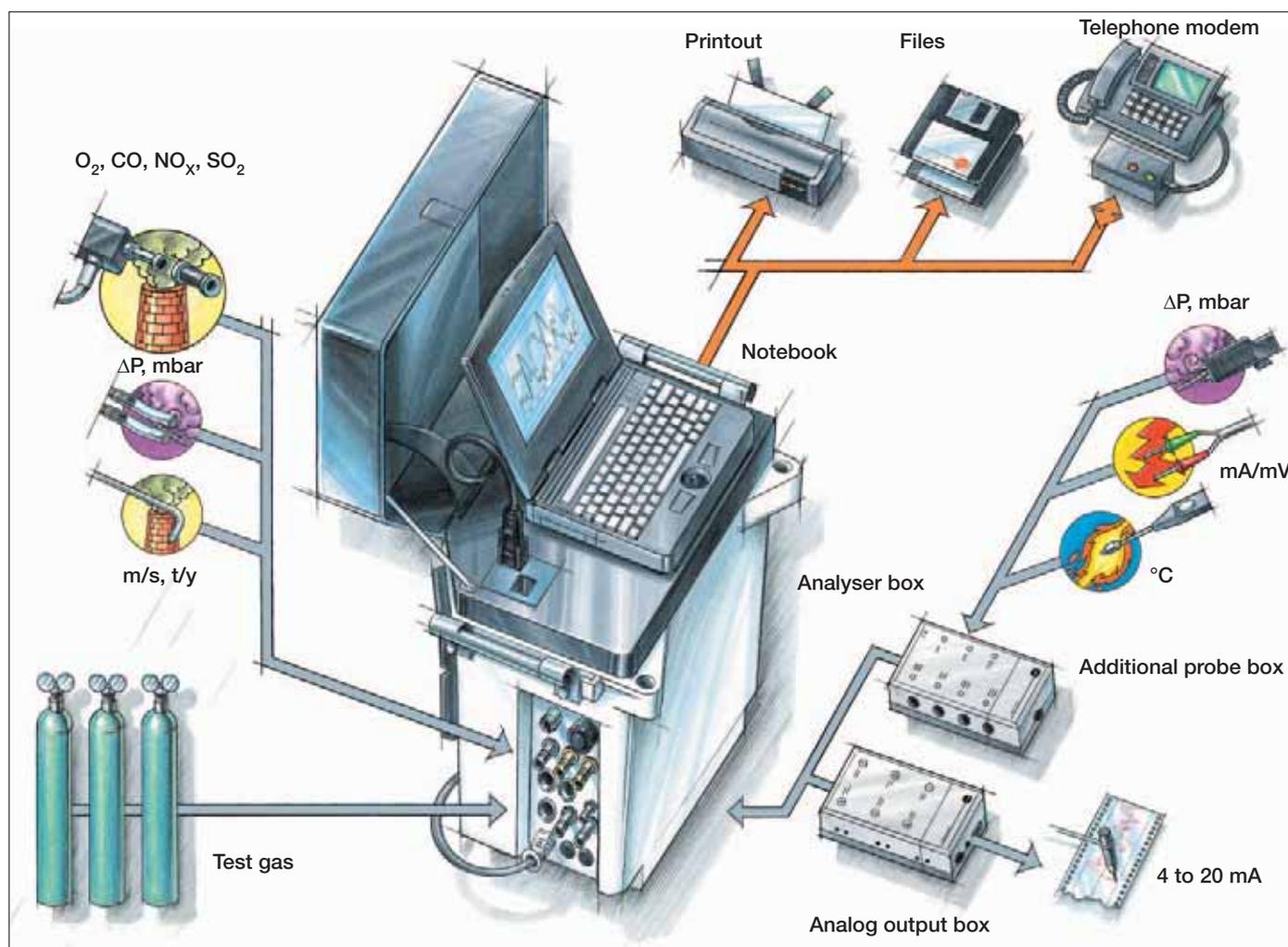


testo 360 – For practically stationary applications such as motor test rigs, for example

Benefits at a glance

- Accuracy fully compatible with stationary measuring technology
- All in one analyser: NO_x, CO, CO₂, SO₂, O₂, HC
- Water level in flue gas, velocity and differential pressure, temperature
- Long-term stable sensor, calibration gas on site is not necessary
- Integrated, low-absorption Peltier gas penetration unit (patented)
- Can be used in extreme conditions
- Data logger operation for several days and weeks without staff supervision
- Extreme measurement ranges in % range with high precision at low concentrations
- Easy maintenance reduces follow up costs

testo 360 system overview



Design and function

The 360 reference measuring system consists of an analyser unit, a notebook and the flue gas probe. All of the sensors (max. 7 gas sensors), the flue gas moisture measurement unit (optional), the measuring range extension unit (gas dilution, optional), velocity measurement (optional) as well as a low absorption gas preparation Peltier cooling unit are located in the analyser box.

The option of an external additional probe unit is available for parallel measurement of temperatures or mA/mV signals (e.g. from FID) and the output of analog signals (4-20 mA).

The flue gas probe is connected

to the heated hose with integrated filter: either the modular industrial probe or any non-Testo or special probes via an adapter.

Handling

testo 360 is easily transported by the operator. The fold-up trolley on which the analyser is placed when working is ideal for this purpose.

Operation and Analysis

The notebook is protected from ambient influences during long-term measurements by the lid which can be locked. Measurements are taken using WINDOWS® software. The

measured data is saved as ASCII on the notebook's hard disk and can be integrated into any analysis program.

The analyser can be operated and data can be transmitted via telephone modem or computer network.

Continuous measurements

Calibration gas can be automatically supplied to the probe for accuracy checks by means of a calibration gas switchover unit (accessory) or directly to the analyser by means of a calibration gas inlet (optional).

Maintenance and Service

testo 360 has been designed so that the user can easily change the sensors – also without calibration gases.