CraNOx II

The sensible way to determine NO_x.

ECO PHYSICS

Measurably better.

Top level measurement comfort.

With CraNOx II ECO PHYSICS is launching the second generation for measurements solutions in the ppb- and ppt-range. It has become compact and complete because it calculates the photostatic equilibrium due to the integrated ozone analyzer.

Applications

Nitrogen containing gases

- *NO*
- *NO_2*
- *NO_X*
- *NH_3*

- Precise ambient measurements
- Tropospheric research
- Long range transport of air masses
- Background ambient monitoring stations
- Flux measurements in rural areas

A demanding task for mankind

The atmosphere is protecting the live on earth. The challenge is to minimize the man-made influence and impact by emissions in order to avoid any damage to this protecting shell.

Nitrogen oxides (NO_X) and particulate matter (PM)

Nitrogen oxides are the important precursors of ozone and are formed in all hot processes, such as in combustion engines, power plants or heating appliances. Ammonia (NH_3), a reduced form of a nitrogen oxide, appears as ammonia salt, usually in tiny particles. Particulate matter and nitrogen oxides are therefore the challenges for instrument manufacturers.

Correct analysis of NO_X

The short form of the title has formed the name CraNOx. The first system has been launched in the early 90ties by ECO PHYSICS. It has been part of many research programs and delivered reliable and continuous data all over Europe from Spitzbergen to Croatia as well as in the Asia Pacific. It consisted of two CLDs with highest resolution and big external pumps, a photolytic converter, an ozone instrument and a calibrator built into a rack of more than 1.8 meters height.

Now, ECO PHYSICS announces the next generation: the CraNOx II – all included – even the pump – in less than a quarter of the size.

CraNOx System II

Two channel CLD SUPREME 899 with pre chambers and integrated pump

PLOC SUPREME PhotoLytic converter, Ozone analyzer and Calibrator in one box

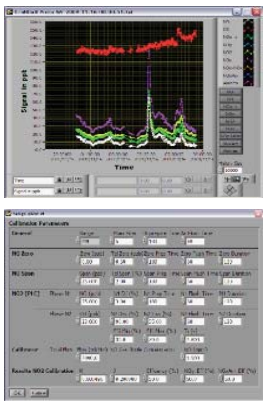
Touch screen for simple user interaction

Tilted front panel giving access to the USB interface

Compact

The prime requirement for the new CraNOx system was a high performing two channel CLD with pre chambers for compensation of the chemical zero. Timely the newly developed platform of the SUPREME LINE offered the necessary sensitivity and speed. With its carefully designed housing of four height units and the integrated powerful pump it was the perfect housing for the further components of the CraNOx system.

All parameters are easily accessible and adaptable



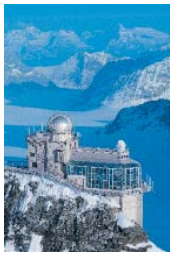
Complete

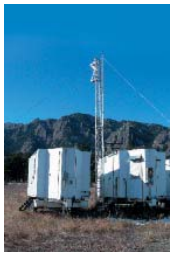
The system would not be complete without an appropriate control software, which handles and manages the different tasks. The software „CraNOxControl" is a LabView® based Windows® application, which measures gases, presents data and performs calibrations.

Customer friendly

The system starts automatically and reaches measure mode for continuous and unattended operation. The measured data are stored and can be displayed on the screen. All control functions are accessible through this touch screen. Connections for mouse and keyboard as well as LAN and USB add the comfort of a PC. For an enlarged display use the video output for either an additional display or a beamer. Just concentrate on the data validation and presentation – all other functions are taken over by your CraNOx system.

High alpine NO_2 measurements on top of Jungfrau (Switzerland) and Boulder (US)





ECO PHYSICS long term alliance with researchers

The analytical instruments from ECO PHYSICS have always been used at the forefront of research projects. In this way the company gained its high reputation for detection of smallest amounts of nitrogen oxides.

Integrated solutions

Since its foundation in 1989 ECO PHYSICS had the needs of the researchers in mind. As the first manufacturer it developed a commercial CLD for nitrogen oxides with ppt resolution. Above the boundary layer of the atmosphere it offered not only a very sensitive, but also a fast analyzer for aircraft measurements to the stratosphere physicist. This know how has been used for other applications: emission studies and process control e.g. in the semiconductor industry have found many satisfied customers with its reliable ECO PHYSICS measurement systems. This experience has lead to the compact CraNOx II system.

Quality is granted

Each analyzer and each system which ever left our company have its individual quality record. We are proud on our Swiss quality label, for which not only ISO 9001 as well as ISO 13485 are an obligation, but beyond many instrument specific standards as well.

ECO PHYSICS

ECO PHYSICS INC. . 3915 Research Park Drive, Suite A-3 . ANN ARBOR, MI 48108-2200 . USA . Phone: (734) 998-1600 . Fax: (734) 998-1180

sales@ecophysics-us.com . www.ecophysics-us.com