



ECO PHYSICS – long term alliance with researchers

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

Integrated solutions

Since its foundation in 1989 ECO PHYSICS has had the needs of the researchers in mind. We were the first manufacturer to develop 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 for the stratosphere physicist. This experience has led to the compact CraNOx II system. And 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.

Quality is granted

Each analyzer and system ever produced by our company has its own individual quality record. We are proud of our Swiss quality label, for which not only ISO 9001 as well as ISO 13485 are an obligation, but additionally many instrument-specific standards as well.



ECO PHYSICS

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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 of measurement solutions in the ppb and ppt range. The new system is smaller and more sophisticated as it calculates the photostatic equilibrium thanks to the integrated ozone analyzer.

Applications

Nitrogen-containing gases

- NO
- NO₂
- NO_x
- NH₃



- 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 earth's atmosphere protects the life 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 combustion processes including engines, power plants or heating appliances. Ammonia (NH₃), 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

Our abbreviation for the above title is CraNOx. The first system was launched in the early '90s by ECO PHYSICS. CraNOx has been part of many research programs and delivered reliable and continuous data all over Europe from Spitsbergen to Croatia as well as in the Asian 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 in 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 II System



Two-channel CLD SUPREME 899 with prechambers 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 main requirement for the new CraNOx II system was a high-performing two channel CLD with prechambers 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

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 digital projector. Just concentrate on the data validation and presentation – all other functions are taken over by your CraNOx II system.

High-alpine NO₂ measurements on top of Jungfrau (Switzerland) and Boulder (US)



Complete

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

