

ECO PHYSICS CraNOx II

Application examples



Precise ambient measurements

Tropospheric research

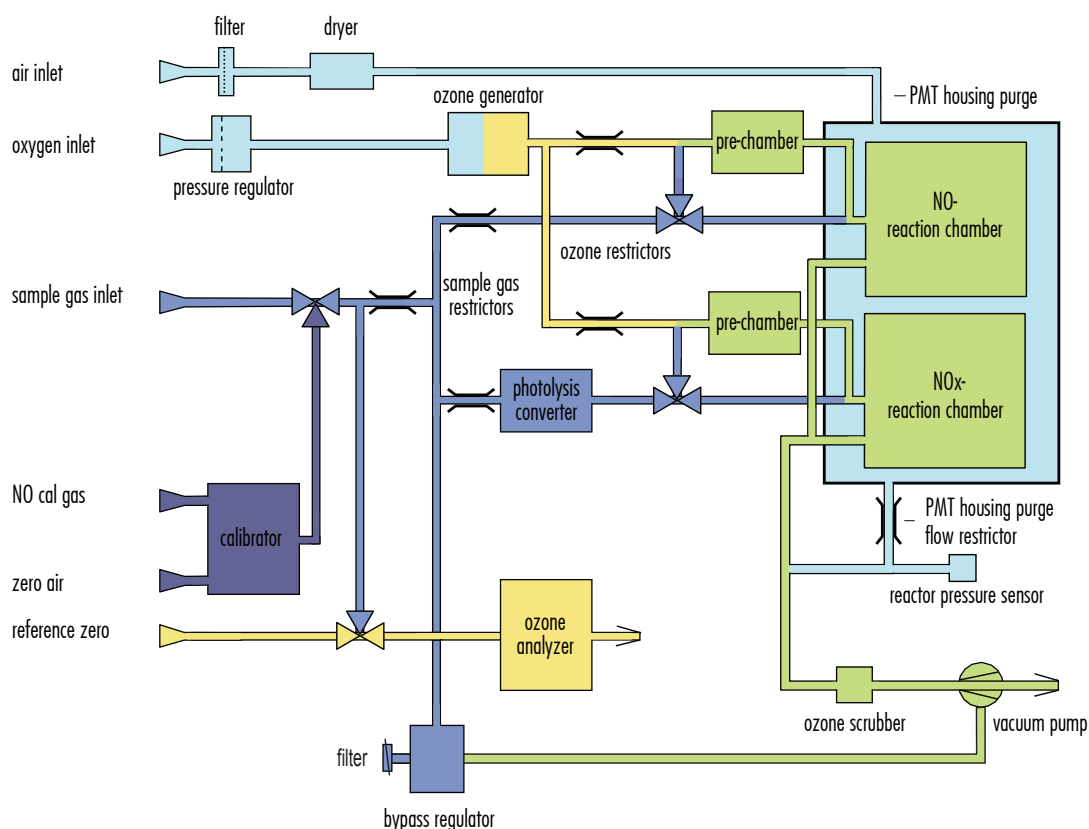
Long range transport of air masses

Background ambient monitoring stations

Flux measurements in rural areas

With CraNOx II ECO PHYSICS is launching the second generation for 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. The CraNOx II system offers the simultaneous measurement of NO and NO₂ as well as optional NH₃ concentrations.

Flow diagram



NO / NO _x detection by CLD:		Interface	RS 232, LAN, keyboard, mouse and video out
Measuring ranges	four freely selectable ranges from 1 - 1000 ppb	Display	7 " color, touch screen
Min. detectable concentration	<0.025 ppb*	Data presentation	online values, graphs, tables
Noise at zero point (1 σ)	<0.01 ppb*	Data storage	> 1 year cont. operation measurement values, calibrations, states of operation
Pre-chambers	chemical zero compensation	Export data format	ASCII (tables and online values)
NO ₂ conversion by photolytic converter:		Power required	950 VA (incl. membrane pump and ozone scrubber)
Converter volume	270 ml	Supply voltage	100-230 V / 50-60 Hz
Light source	metal halide lamp (200 W)	Dimensions	height: 356 mm (14 ") width: 450 mm (19 ") with molding: 495 mm depth: 650 mm (25.6 ")
Analysis	automatic correction for photo- dissociation rate and ambient ozone concentration	Weight	75 kg
Ozone detection by UV photometer:		Delivery includes	CraNOx II system, power cable, operator's manual
Measuring ranges O ₃	50 to 1000 ppb	Standard	CraNOx II
Precision	1 ppb		two channel, pre-chambers photolytic converter ozone analyzer calibrator
Noise	± 1 ppb	Options	CON 765 C
Calibrator:			NO _y Gold converter NO _x Amines, NH ₃ (requires an additional CLD899)
Principle of operation	Mass Flow Controller		
Accuracy (of set point)	± 1 % (flow and concentration)		
Modes of operation	man. or automatic zero / span range selectable converter efficiency check and compensation		
General specifications:		* depending on filter setting	
Lag time	< 3 sec	ECO PHYSICS reserves the right to change these specifications without notice.	
Rise time (0-90%)	<1 sec		
Temperature range	15-35 °C		
Humidity tolerance	5-95% rel. h (non-condensing, ambient air and sample gas)		
Sample flow rate	2.7 l/min		
Input pressure	ambient		
Dry air flow rate	140 ml/min		
Oxygen use for O ₃ generator	200 ml/min		

CraNO_x, a combination of best available technology in a "turnkey" system to ensure automatic and trouble free operation for tropospheric NO_x analysis.

Correct analysis of NO_x - CraNOx II



ECO PHYSICS