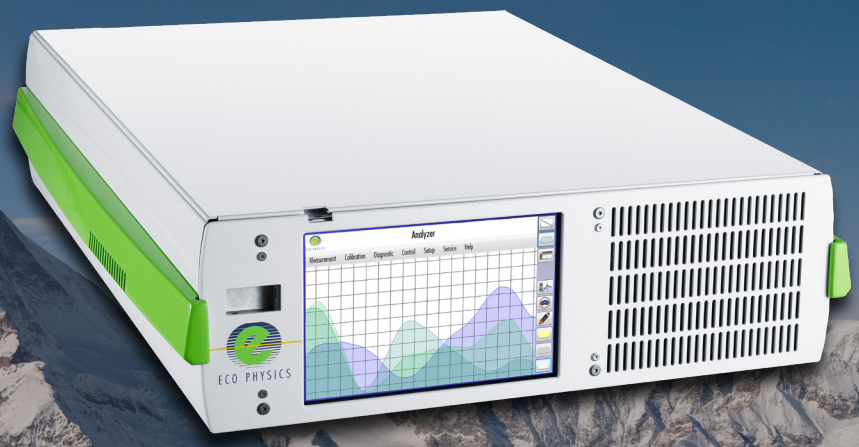
ECO PHYSICS nCLD 800 Series



APPLICATION EXAMPLES

Emissions Analysis in the Fields:

Industrial · Stack
Boiler · Automotive
Aviation · Marine
Process · Chemistry

Immissions Analysis in the Fields:

Environmental · Ambient
Air · Research

Measurement of: NO · NO_2 · NO_x · NO_y · NO_x-Amines · NH_3 · O_3

Measurement Ranges

Within each series, the second digit in the model name defines the measurement range of your first channel. If you estimate your highest concentration to be below 5000 ppm, you will have the choice of full range of any figure between 5 and 5000 ppm, e.g. 33 ppm or 850 ppm. Instruments configured with a smaller measurement range posses a lower minimal detectable concentration (MDC).

Channels

A second channel is necessary, if you want to measure NO_2, NH_3 or NO_x-Amines. In general, the second channel has the same measurement range like the first. You may choose a second, independently configured channel, but then your nCLD must be operated in dual mode with two sample gas inlets. If you decide not to insert a second channel, please leave the third column blank.

Gas Composition

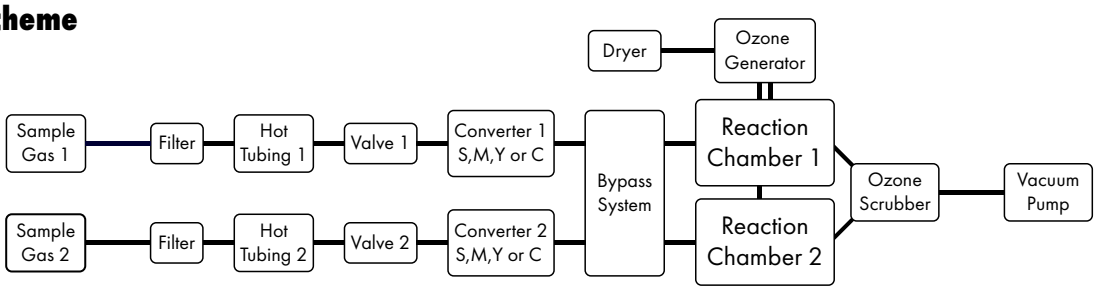
The converters differ in their efficiency to convert nitrogen-based gas components to NO. Depending on type and concentration of your gas mixture, please select the appropriate converter. For general purpose and rough conditions, please choose the endurable steel converter. For higher NO_2 selectivity, you may choose the metal converter for high NO_x concentrations and the molybdenum converter for low NO_x concentrations. The catalytic converter is best suited for the total conversion of amines (including ammonia) and nitrogen oxides.

Ranges	Ch.1		MDC	
Up to 5000 ppm =	8	2	0.125	ppm
Up to 500 ppm =	8	4	0.0125	ppm
Up to 50 ppm =	8	5	0.4	ppb
Up to 5 ppm =	8	8	0.05	ppb

			Ch.2
Up to 5000 ppm =	8	x	2
Up to 500 ppm =	8	x	4
Up to 50 ppm =	8	x	5

Converters				
Steel =	8	x	x	S
Metal =	8	x	x	M
Molybdenum =	8	x	x	Y
Catalytic =	8	x	x	C

Principal Scheme



Measurably better

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Options

With the information given on the previous page, you have defined the basic configuration of your personal analyzer. To choose further options, we would be glad to assist you with our expertise. In this case, we kindly ask for the following information, referring to the physical conditions of your measurement task:

Gas composition:	H_2O and CO_2 concentrations
Temperature:	°C of the sample
Intended sample preparation:	e.g. use of gas cooler
Sample inlet pressure:	mbar stable or variable

Pressure regulation (balances out pressure variations)	r
Heated sample inlet (hot tubing)	h
Second sample gas inlet	d
Single calibration valve	v1
Two calibration valves for pressurized calibration (span & zero)	v2
Sample inlet filter	f
Pre-chamber (only nCLD 88)	p
Rack mount	
Sample inlet valve	e
External restriction	t
No calibration limits	

The combinability of options is limited.

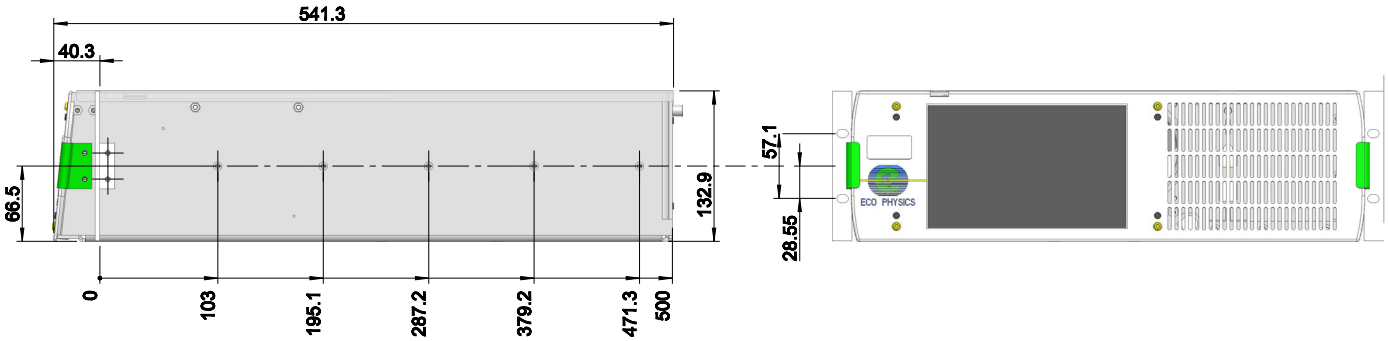
Specifications

Measuring range	four user-defined ranges
Flow rate	1 l/min
Input pressure	600-1200 mbar
Linearity within range	<1% from 6% to 100% of range
Temperature range	0–40 °C
Humidity tolerance	5%–95% rel. h (non condensing, ambient air and sample gas)
Ozone generation	internal ozone generation (without external gas supply)
Power requirement	400 VA (incl. vacuum pump and ozone scrubber)

Weight	from 23 kg (51 lb)
Dimensions	Height: 133 mm (5 1/4") Width: 450 mm (19") With molding: 495 mm Depth: 540 mm (21.2")
Delivery includes	nCLD8xx, power cable, USB-LAN adapter, HDMI adapter, FTDI-RS232-USB cable
Supply voltage	100-240 V / 50-60 Hz
Interface	USB (3x), HDMI, RS232, Bluetooth, LAN, WLAN
Optional I/O interface	Analog signal output: 0-10 V, 4–20 mA into 500Ω max. (24 VDC)

ECO PHYSICS reserves the right to change these specifications without notice.

Technical Drawing



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