

CLD 790 SR

A star in the high spheres



Fast, highly sensitive 2 channel chemiluminescence-based NO-analyzer for all applications involving the measurement of extremely low concentrations. Optimised for airborne use, typically in stratospheric research programs:

typical signal sensitivity of 15 cps/ppt and typical detection limit of < 2 ppt/10 sec (1σ);

extremely compact, light, very low power consumption and fast response time;

totally microprocessor controlled and equipped with different I/O: RS 232, digital I/O, analog signal output.

Available options are:

- NO₂ and NO_y converters,
- Ozone measurement channel,
- Different design of housing,
- Pressurized housing,
- Measurement data back-up





ECO PHYSICS CLD 790 SR

Performance:

Principle: 2 completely independent channels, with pre-chambers, for NO measurement

Sensitivity: >15 cps/ppt

El. Zero Signal: < 1000 cps

Noise at Zero: < 5 ppt in 1 sec

Detection Limit: 3σ : < 5 ppt/10sec (1σ : < 6 ppt/sec)

Measurement frequency: 8 Hz max.

Integration Interval: freely selectable in 0.1 sec. steps.

Signal Filter: Dynamic, shortest time constant = 0.1 sec. Sliding average, Arithmetic average. Frequency of zero-point determination freely selectable.

Channel Synchronisation: Yes, selectable

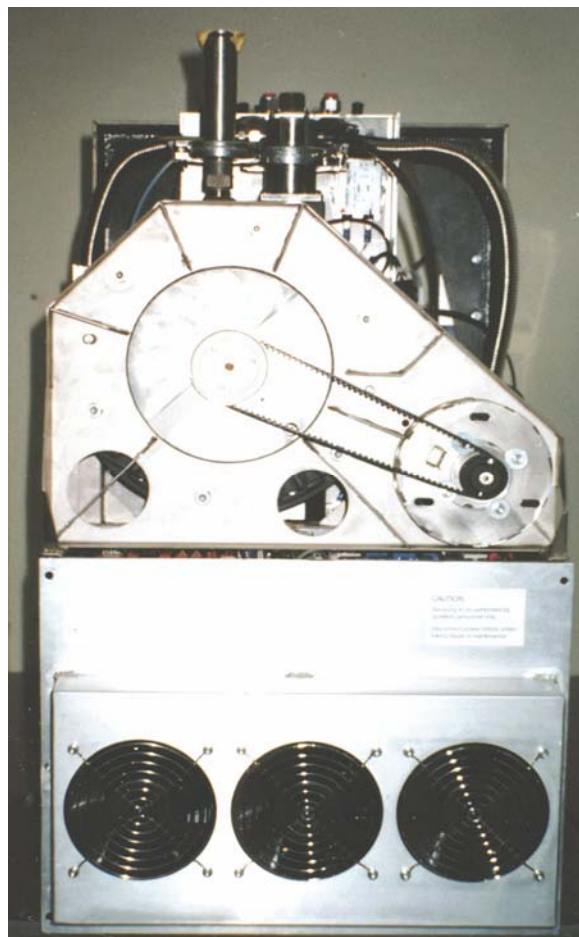
T90 Time: < 1 sec, dependent on inlet pressure

Zero Point Drift: < 1% / day

Calibration: Zero point, Span, λ -determination (reaction ratio Pre-chamber/Main-chamber). Calibration data filter is independent of measurement data filter. Measurement channels can be calibrated together with the same gas or individually with different cal. gases.

Linearity: < 1%

Interferences: negligible (can be measured and corrected by pre-chamber principle).



CLD 790 SR: A Frame from another Space. Inside.



CLD 790 SR: A Golden Standard. Reaction chambers.

Operating and physical characteristics:

Measuring Range:	0 to 50 ppb
Sample Flow:	≈ 1.7 l/min per channel
O ₂ flow:	≈ 0.3 l/min per channel
Dry air flow:	≈ 100 ml/min
Reaction chamber pressure:	< 10 mbar
Gas inlet:	thermostatised
Reaction chamber:	thermostatised
Sample inlet:	pressure regulated
Operating range:	
Pressure altitude:	1000 to 80 mbar
Ambient (cabin) pressure:	750 to 1200 mbar
Ambient Temperature:	5 to 35 °C at 5 to 95%RH
Power consumption:	< 800 Watt, incl. pump
Operating Power:	28 VDC +/- 1VDC
Housing dimensions:	Width x Height x Depth: app. 440 x 735 x 470 mm
Total weight (incl. pump):	app. 80 kg