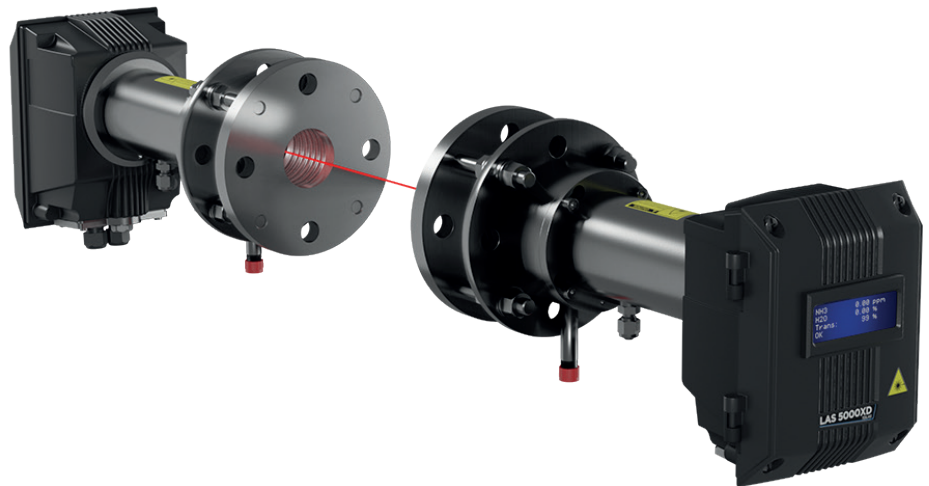


In-Situ laser (TDLS) gas analyzer

PROCESS & EMISSIONS MONITORING SYSTEMS



WHY CHOOSE LAS 5000XD?

- ✓ No sampling system needed
- ✓ No gas temperature influence
- ✓ Gas matrix interference free
- ✓ Calibration free measurement
- ✓ High precision gas concentration measurement and fast response time
- ✓ **New** Embedded ClearPath functionality

KEY FEATURES

- Highly sensitive and selective measurement
- High signal-to-noise ratio
- No measurement drift
- Response time 1 s
- Large dynamic range from ppm to %
- Real-time communication between Transmitter (Tx) and Receiver (Rx)
- Robust, ready for Ex Zone II (certification to come)

💡 CLEARPATH

Interference of relative humidity, O₂ or CO₂ is removed in purging areas.

Operator's benefits:

- No need for N₂ or dry air purge
- High accuracy of O₂ measurement
- High accuracy of H₂O measurement
- High accuracy of CO₂ measurement

A WIDE RANGE OF APPLICATIONS FOR CEMS AND PROCESS

- Ammonia slip control (DeNox)
- Process and combustion control
- HF emission control in aluminum plant
- HCl/SO₂ abatement control
- Ethylene cracking furnace control
- HCl level in semiconductor production
- Ammonia concentration control in pet food, fertilizer plants, etc.

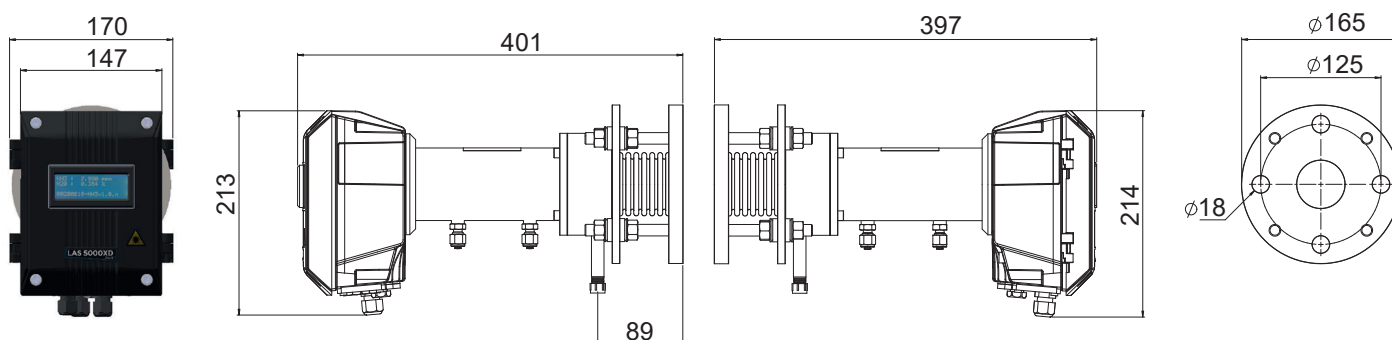


Embedded web server

CUSTOMER BENEFITS

- > Low maintenance and cost of ownership
- > No need for N₂ or dry air purge: Oil & dust free air instrument is enough
- > Process optimization leading to reduction of operating costs

In-Situ laser (TDLS) gas analyzer **LAS 5000XD**



TECHNICAL SPECIFICATIONS

Concentration ranges:

NH ₃ + H ₂ O	0-10 ppm / 0-5000 ppm + 0-5% / 0-40%
HF	0-3 ppm / 0-500 ppm
CO + H ₂ O	0-50 ppm / 0-1% + 0-5% / 0-40%
CO + CO ₂	0-1% / 0-100% + 0-1% / 0-100%
CO ₂ + H ₂ O	Coming soon
O ₂	Coming soon
HCl + H ₂ O	Coming soon
Other gases	Available upon request

Technology	ADLAS (Advanced Detection Laser Absorption Spectroscopy) <ul style="list-style-type: none"> Optimized Opto-Mechanical Design Powerful Signal Processing and Algorithm High Speed Low-Drift Electronics Independent Spectroscopy Technique
Lower Detection Limit	< 1% of FS
Response Time (0-90%) - Short	1 s
Lack of fit/Linearity	≤ ±1%
Flue Gas Temperature (°C max)	
NH ₃ + H ₂ O / HCl + H ₂ O / HF	+400 °C (Depends on the concentration range)
CO + H ₂ O / O ₂ / CO + CO ₂	+1200 °C (Depends on the concentration range)
Flue Gas Pressure	2 bars max (absolute)
Display on Tx	4 x 20 LCD
Communication	Modbus RTU (RS485) / Ethernet (RJ45) - Web server
Power supply type	+ 24 V DC, ripple and noise 50 mV
Power consumption	15 W (warm-up), < 15 W in standard use
Recommended T° (ambient)	-20 °C to +55 °C
IP index Tx & Rx enclosures	IP65
Flange specification requirement on stack	DN50 PN16, 2" - 150 lbs, Class 150
Flange material	SS 316 L
Air consumption (main purge - necessary)	5-50 L/min (to adjust according to site conditions) (dry and oil free, ISO 8573.1 Class 2-3)
Air consumption (secondary purge - recommended)	2-3 L/min (dry and oil free, ISO 8573.1 Class 2-3)
Stack diameter compatibility	From 0.5 to 20 m

Note - The technical specifications are defined in the following conditions: Gas temperature = 25 °C / gas pressure = 1013 mbar / pathlength = 100 cm / ambient temperature = 25 °C

OPTIONS

Junction Box :	Analog I/O (2 x 4-20 mA/2 x 4-20 mA) - Digital Output (2 relays)
Thermal Shield	
Audit Cell	
Inline Cell	
Alignment Tool	
Weather protection covers	

