



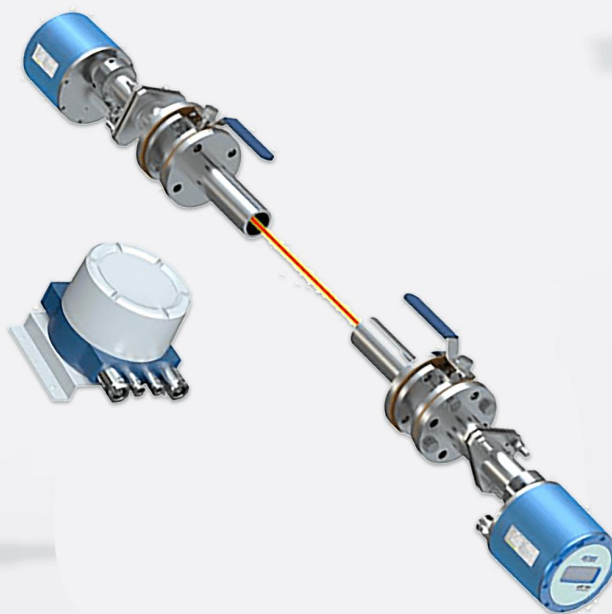
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Cross Duct Gas Analyzer



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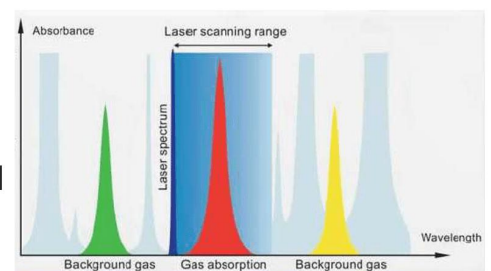
Plot No. 21 & 22, Block No. 24,
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VASTHI Technology is committed to the integrity, strength and quality of our products. We're internationally recognized. We warmly welcome you to visit us for business negotiation and products' inspection.

TDLAS Technology

TDLAS (Tunable Diode Laser Absorption Spectroscopy) mainly uses the character that tunable laser's narrow band and wavelength change with the current. By periodically modulating the current, the laser wavelength can be periodically changed within a small range, and the "single-line absorption spectrum™" data of the measured gas can be obtained in each cycle. At present, the TDLAS technology has developed into a kind to high sensitivity, high resolution, fast response and high selectivity of gas detection technology in the molecular spectroscopy, industrial process monitoring control and diagnosis analysis, the engine combustion process efficiency and motor vehicle exhaust measuring trace, explosive detector, the atmosphere pollution monitoring, etc.,

By using a tunable semiconductor laser,VLGA series laser gas analyzer scans the specific absorption lines of the measured gas (no background gas) to get the second harmonic of the gas. Through processing and analyzing the second harmonic and the broadening information of the gas, the concentration of the gas is obtained.



Technical Characteristics

----High Selectivity----

TDLAS is high resolution spectrum technology, due to the "fingerprint" characteristics of the molecular spectrum, it is not affected by the interference of other gases. This feature has obvious advantages compared with other methods.

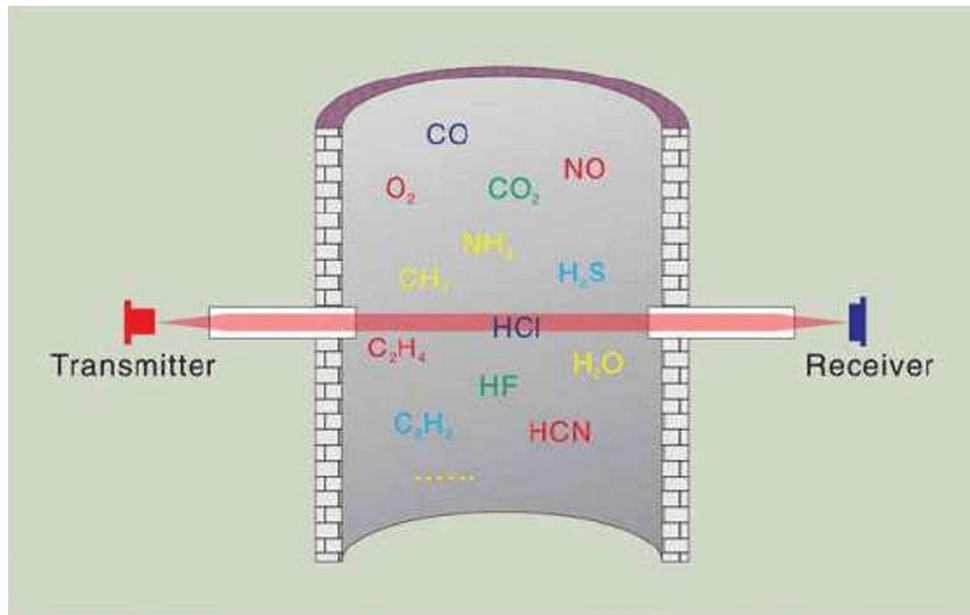
----High Versatility----

TDLAS is an effective general technology to all activist with infrared absorption. Only need to change laser and standard gas, the same instruments can be convenient to measure the other components. Based on this characteristic, it can be easily changed to multi -component measurement instrument.

----High Sensitivity----

TDLAS has the advantages of rapid response speed and high sensitivity.

In the case of not losing sensitivity, its time resolution can be found in ms level



Gas Detection Parameters

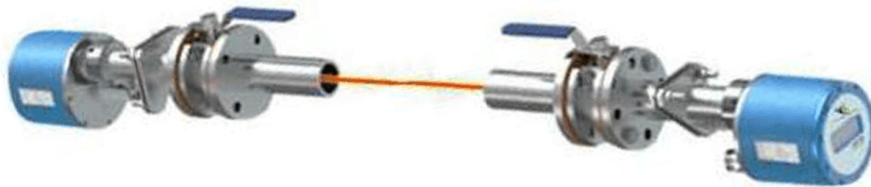
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O ₂	0 - 1 %Vol 0- 25 % Vol .
CO	0 - 1000 ppm 0 - 100% Vol
CO ₂	0 - 1 000ppm.0 — 100% Vol
H ₂ O	0 - 100 ppm,0 - 100% Vol.
H ₂ S	0 -100ppm,0 -100% Vol
HCl	0 - 100ppm, 0 - 50%Vol .
HF	0 - 20ppm, 0 - 50%Vol .
N H ₃	0 - 10ppm ,0 - 100% Vol .
CH ₄	0 - 200ppm ,0 — 100% Vol .
C ₂ H ₂ ,	0- 50ppm.0 - 100% Vol
C ₂ H ₄	0 — 100ppm ,0 - 100% Vol .

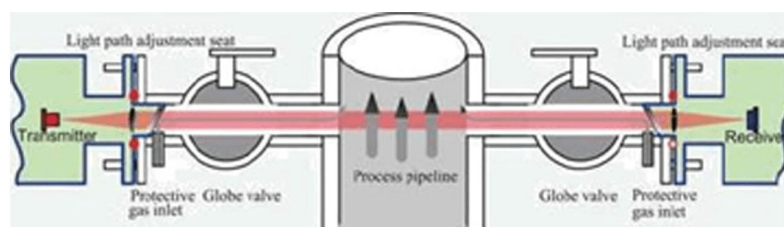
VGA-1000 Laser Gas Analyzer

VGA-1000 is a flameproof tunable laser gas analyzer based on TDLAS technology, which can in-situ analyze O₂, CO, NH₃, CO₂, CH₄, H₂O, HCl, HF and other gases in various complex conditions. It consists of transmitter, receiver and connection box. The transmitter drives the tunable diode to emit laser of certain wavelengths, which passes through the environment to be measured, then reaches the receiver. The receiver performs photoelectricity conversion, signal processing and spectrum data analysis to obtain the measuring result. The connection box contains I/O interface, making the connection of power cable and signal cable convenient



System Composition

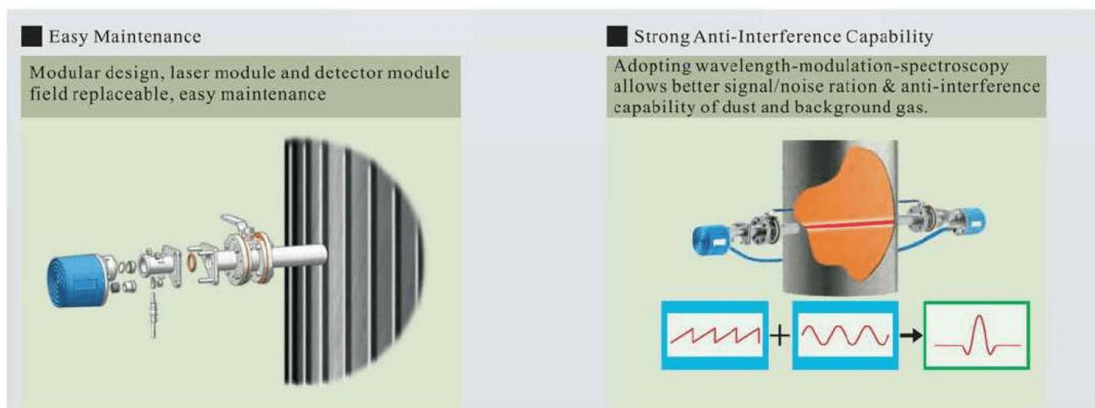
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Features

Easy optical path adjusting, XY direction non-compiling adjusting.

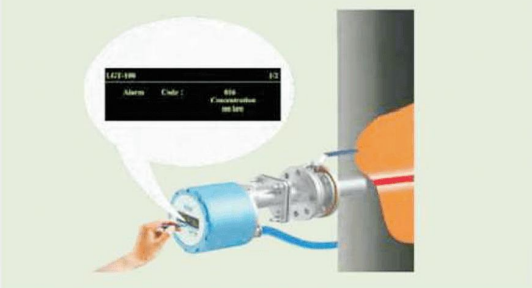
- * Small drift, long maintenance period, drift $\leq \pm$ F.S./half year.
- * "Single line" spectrum technology, free from interference of background gas.
- * Integrated structure design, high stability and reliability.
- * Integrated flameproof structure, consuming less purge gas compared with positive-pressure model ' In-situ measurement without pretreatment system avoids adsorption, blockage and damage, reduces cost



VGA-1000 Laser Gas Analyzer

Self Diagnose Function

Comprehensive self diagnose function, records and saves alarm information, easy to check



Easy Optical Path Adjusting

XY direction non-coupling adjusting, easy adjusting



Technical Specifications

Technical indicators

Optical Channel Length	12Dm
Linearity Error	+/- 1%r.S.
Repeatability	</ 1%
Span Drift	+1%F.S./half year
Zero Drift	x1%F.S./half year
Maintenance Cycle	2 times/year, clean optical window
Calibration cycle	2 times/year
Type of protection	ExdIIC T6Gb
Enclosure Rating	IP66
Response Time (T00)	</ 1s

Interface Signal

Analog Output	2x4-20mA output
Analog Input	2x4-20mA input
Digital Output	RS485/RS232/GPRS
Relay Output	2(34V, 1A)

Operating Conditions

Power Supply	24VDC, 2DW
Purge Gas	0.3 IMP
Ambient Temperature	-20-+60

Installation

Installation Way	In-situ installation
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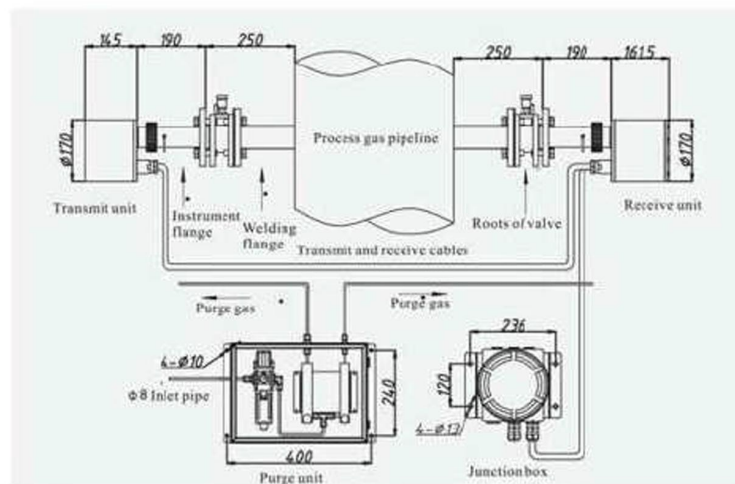
Installation Dimensions

Purging unit consists of filter and device to stabilize flow, provides stable purge flow to avoid glass contamination

Receiver is equipped with OLED screen, operated by magnetic pen.

Transmitter and receiver is installed on each side of the flue gas pipe through connection flange

The Communication box contains I/o interface, making the connection of power cable and signal cable convenient.



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