VASTHI INSTRUMENTS

Model No : V.uv - 2001

UV DOAS GAS ANALYZER ULTRAVIOLET DIFFERENTIAL OPTICAL ABSORPTION SPECTROSCOPY

- Flue gas continuous emission monitoring (CEMS) for the power plants (analyzer SO2, NO, NO2, and O2)
- DeSOX Process monitoring (analyzer SO2 and O2)
- DeNOx Process monitoring (analyzer NO, NO2, NH3 and O2)
- Waste incineration flue gas continuous emission monitoring (analyzer SO2, NO, NO2, and O2)

Vasthi UV DOAS Gas Analyzer Ultraviolet Differential Optical Absorption Spectroscopy

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(UV DOAS) Gas Analyser

The Vasthi UV DOAS Ultraviolet differential optical absorption spectroscopy gas analyzer is an independently self developed flue gas analyzer product which is suitable for on-line gas analysis of environmental protection and industrial controlling purposes. Based on the ultraviolet absorption spectrum and differential optical absorption spectrum principle, it adopts the unique optical technology platform, where it carries out the on-line analyzer and measurement for concentration of gases such as SO2, NO, O2, H2S, CI2, NH3, NO2, CO and CO2 etc. Under normal conditions, the gas component of SO2, NO and O2 is measured and other gas components can be extended; one analyzer can simultaneously carry out measurement for 5 gas components at a maximum.

The product has features of high accuracy measurement accuracy and reliability. Fast responses and wide applicable scope. All indexes reach or exceed those of domestic and foreign similar products.

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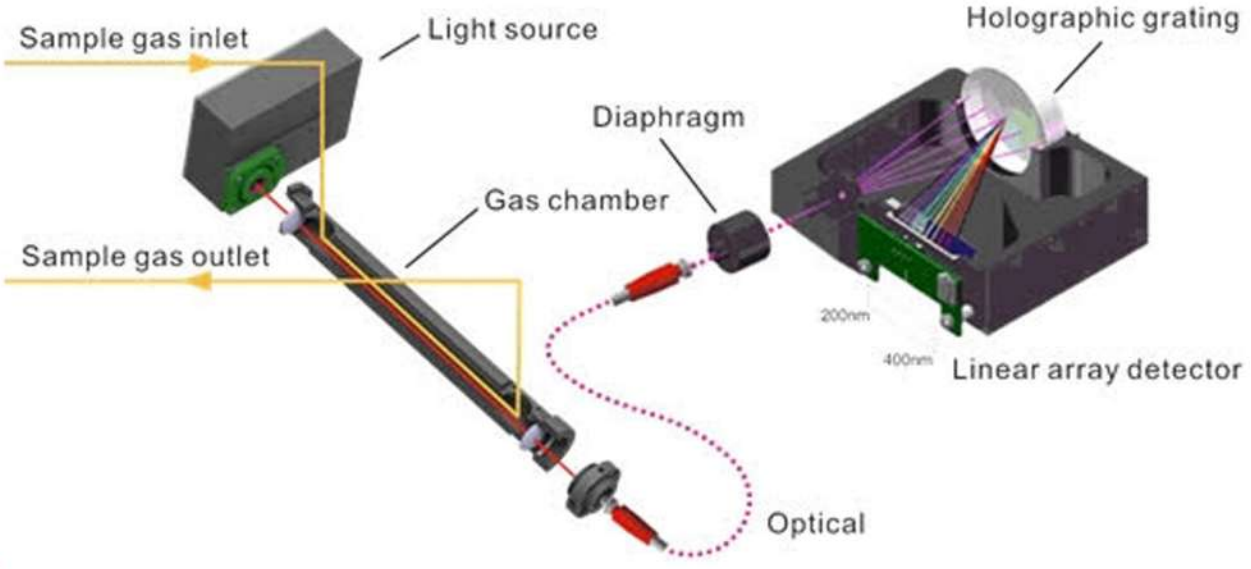
(UV DOAS) Gas Analyser

UV DOAS has different absorption in different spectral band, the absorption of different gases in the same spectral band has superposition effect. Through the analysis of continuous spectrum, a variety of gases can be measured at the same time. The holographic grating is used for light splitting of light absorbed by gas to be measured. Sensor array are used to convert the spectral optical signals into electrical signals. After obtaining the continuous absorption spectra of medium, and a variety of gases can be measured at the same time.



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(UV DOAS) Gas Analyser

Features :

The product adopts the most advanced online analysis technology and has high accuracy ; low lowering limit and small temperature drift.

- → **It uses the ultraviolet absorption spectrum gas analysis technology and chemometrics algorithm.**
- → **The measurement accuracy is not affected by water and dust. Low detection lower limit and small temperature drift. Strong gas chamber, low operation and maintenance cost.**
- → **The gas chamber of the analyzer is made of stainless steel and the internal part is not required to carry out mirror polish and gold plating. The detector is connected to the gas chamber Via the optical fiber, which is convenient for replacement and achieves low maintenance cost.**

The life of the light source is 10 years

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(UV DOAS) Gas Analyser

→ The light source adopts the pulse xenon lamp, with long life, excellent reliability and no preheating time.

→ Achieve the simultaneous measurements for NO and NO2

→ Carrying out the simultaneous measurements for NO and NO2, and then obtain NOx by the accumulation method. Dispense with NO2→NO converter.

→ NO optical moving parts, strong vibration resistance and high measurement reliability

→ Modular design, good expansibility and convenient maintenance

→ Configured to produce the diversified and customized products so as to meet user requirements.

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(UV DOAS) Gas Analyser

Application :

This product can widely be applied in the following areas :

- → **flue gas continuous emission monitoring Systems (CEMS) for the power plants (analyze SO2, NO, NO2 and O2)**
- → **DeSOX process monitoring (analyze SO2 and O2)**
- → **DeNOX process monitoring (analyze NO, NO2,NH3 and O2)**
- → **Waste incineration flue gas continuous emission monitoring (analyze SO2, NO, NO2 and O2)**
- → **Troce Cl2 analysis of the PVC process and titanium dioxide production process for chlor-alkali plants (analyze Cl2)**
- → **Sulfur recovery process gas analysis (analyze SO2 and H2S)**
- → **Natural gas purification process gas analysis (analyze trace H2S)**
- → **Methyl iodide analysis for the coal chemical industry (analyze CH3I)**
- → **Online air monitoring (analyze SO2, NO2, and O3),etc.**

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(UV DOAS) Gas Analyser

Specifications

Measurement principle :	
SO2, NO and NO2:	**Ultraviolet differential technology ,**
O2:	**Electrochemical principle (built-in), and zirconium oxide principle (external)**
CO:	**Electrochemical principle or NDIR technology**
CO2:	**Infrared NDIR technology**
Measurement range :	
SO2:	**0~300~3000ppm; 0~100~300ppm; 0~20~100ppm (optional and customizable)**
NOx:	**The same as above**
Analog output signal :	**4-20mA, configurable**
Analog input signal :	**4-20mA, configurable**
Power supply :	
Rated voltage:	**100V~240V**
Rated power:	**120W**
Operating conditions :	
Ambient temperature:	**-10°C~50°C**
Ambient humidity:	**90%RH max, non-condensing**
	Performance
Repeatability :	**1%**
Linearity :	**±2%F.S.**
Zero drift :	**±2%F.S./week**
Span drift :	**±2%F.S./week**
Response time :	**10 seconds Standard Gas Condition**

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(UV DOAS) Gas Analyser

Flow rate : 1.5 L/min±0.5 L/min
Pressure : The current ambient pressure ±0.1Bar
Temperature -10~50°C
Humidity : 95%RH, no dew
Gas for calibration : Zero gas: Dry N2 or air. When in use of zirconia oxygen measurement module, nitrogen should not be used for zeroing. Span gas: Concentration relative to 90~100% of the measured component range, concentration more than 100% should not be used.

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