

Online Multi Gas Analyzer

Providing latest in combustion gas & emission analyzers for boiler, engine, furnace, and other application



CH₄

H₂

SO_x

NO_x

NH₃

CO₂

HF

HCL

HCN

CO

O₂

Online Multi Gas Analyzer

Vasthi OMGA 8000 is one of the most powerful gas analyzer you can buy. The combination of multi gas emission analysis, differential pressure and temperature measurement reduces service costs and ensure the safe operation of appliances.

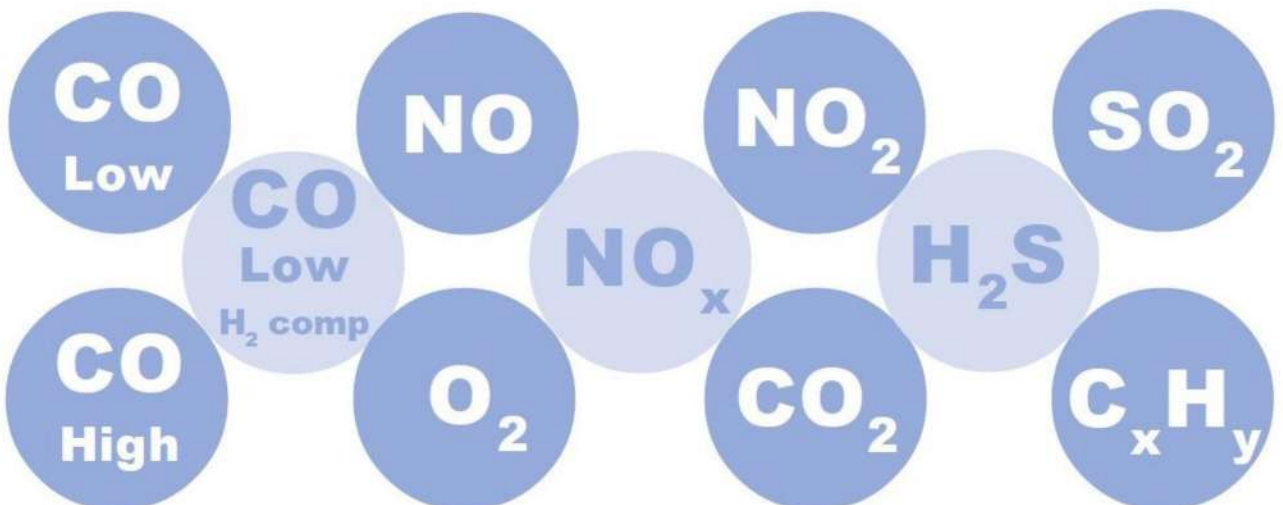
The analyzer is rugged, reliable and flexible. By choosing up to six out of a choice of nine gas sensors, it can be configured to meet specific monitoring requirement. Data logging can be enable for remote analysis of emissions, with user configurable time periods.

FEATURES & BENEFITS

- ❖ Up to 9 simultaneous gas measurements - user selectable
- ❖ Self-check facility and special software ensure accurate analysis data.
- ❖ Robust, industrial design - for daily use in the harshest plant environments
- ❖ Visual alarms for lo bat, No flow and Sensor Fault
- ❖ Optional Integral Printer- instant record of measurement readings
- ❖ Internal Memory - to save the data in system

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- ❖ NDIR Sensors available - for CO₂ & C_xH_y , CO,CH₄, Sox and Nox more gases
- ❖ Easy to use menu- to operate and save the setting
- ❖ High Quality Stainless Steel Probe - For high temp gases.
- ❖ Back lit Display
- ❖ Real time clock
- ❖ Logging of 100 Gas Analysis Reports
- ❖ Data Output to Printer or PC



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Measurement Specifications

Parameter	Method	Indication range	Display resolution	Accuracy	Detection limit	Response time(t90)
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Gases to be measured in standard configuration

O ₂ - oxygen, volumetric concentration	electrochemical gas sensor	0...25 %	0.01%	±0.2%or 2% rel.	0.01%	45 s
CO ₂ - carbon dioxide, volumetric concentration	calculated from volumetric concentration of O ₂	0...25 %	0.01%	±0.2%or 2% rel.	0.01%	45 s

CO - carbon monoxide, volumetric concentration	electrochemical gas sensor	0...5,000ppm	0.1 or 1 ppm as set	± 5 ppm or 5 % rel.	5 ppm	45 s
CO - carbon monoxide, volumetric concentration (optional)	electrochemical gas sensor	0...10%	10 ppm or 0.001 %	± 50 ppm or 5 % rel.	10 ppm	45 s
NO / NO _x - volumetric concentration of nitrogen oxides.	electrochemical gas sensor	0...5000 ppm	1ppm	± 5 ppm or 5 % rel.	1ppm	45 s
NO ₂ - volumetric concentration of Nitrogen dioxide.	electrochemical gas sensor	0...1000 ppm	1 ppm	± 5 ppm or 5 % rel	1 ppm	45 s

SO ₂ / Sox- volumetric concentration of Sulphur dioxide.	electrochemical gas sensor	0...5000 ppm	1ppm	± 5 ppm or 5 % rel.	1ppm	45 s
C _x H _x	Catalytic polluster	0-100% LEL	0.1%0.01	± 2 % rel	1%	45s
H ₂ S- volumetric concentration of Hydrogen sulfide.	electrochemical gas sensor	0...5000 ppm	1ppm	± 5 ppm or 5 % rel.	1ppm	45 s
H ₂ - volumetric concentration of Hydrogen	electrochemical gas sensor	0...2000 ppm	1ppm	± 5 ppm or 5 % rel.	1ppm	45 s

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Gas Measured with optional IR Sensors

CO ₂ - carbon dioxides volumetric concentration	NDIR sensor	0...25 % 0...100%	0.01% 0.1%	0.5 % from Range or +/- 3 % rel.	0.2 %	45 s
CH ₄ - Methane, volumetric concentration	NDIR sensor	0...5 % 0...100%	0.01% 0.1%	0.5 % from Range or +/- 3 % rel.	0.2 %	45 s

CO - carbon monoxide, volumetric concentration	NDIR sensor	0...25 % 0...100%	0.01% 0.1%	0.5 % from Range or +/- 3 % rel.	0.2 %	45 s
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T _{gas} - flue gas temperature	Thermocouple	-10..1000 °C	1 °C	1 °C	±2 °C abs., or 1.5 % rel.	30 s
T _{amb} - ambient temperature	Thermistor	-10..100 °C	1 °C	1 °C	±1 °C abs., or 1.5 % rel.	30 s
Pressure	DMS bridge	-20...+20 hPa	0.1 Pa	0.1 Pa	±2 Pa abs., or 5 % rel	10 s
Diff. Pressure	DMS bridge	-20...+20 hPa	0.1 Pa	0.1 Pa	±2 Pa abs., or 5 % rel	10 s
TI (CO/CO ₂ -Toxic Index)	calculated	0... 1 %	0.01 %	5 % rel.	0.01 %	10 s
Lambda - excess air number	calculated	1...10	0.01	0.01	0.01	5 s
q _A - combustion losses	calculated	0...100 %	0.1 %	0.1 %	0.1 %	5 s
Eta - efficiency	calculated	0...100 %	0.1 %	0.1 %	0.1 %	5 s

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Applications



- Ambient and Emissions Monitoring.
- Stack or Exhaust Gas Analysis in Boilers
- Power & Industrial Plants
- Process Analysis
- Fuel Efficiency
- Internal combustion Engines
- Furnaces
- Quality Control Labs

Special Futures

Calibration: The analyzer comes standard with a complete factory calibration. The analyzer can easily be recalibrated with span gas cylinders. Recalibration is recommended at least once each year to ensure analyzer accuracy.

Flue gas & ambient temperature: The analyzer takes a direct thermocouple temperature measurement of the flue gas, and has an ambient temperature sensor fitted. These are required for making accurate combustion efficiency calculations.

Setup and measure within minutes: Simply switch on, an automatic zero calibration is performed by the analyzer. Plug in the sample probe and take real-time gas readings in a matter of minutes.

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Sample Collecting or treatment: A condensate & Dust trap & a low porosity in line filter to condition the sample. Time tested, Sturdy, High suction inbuilt pump.

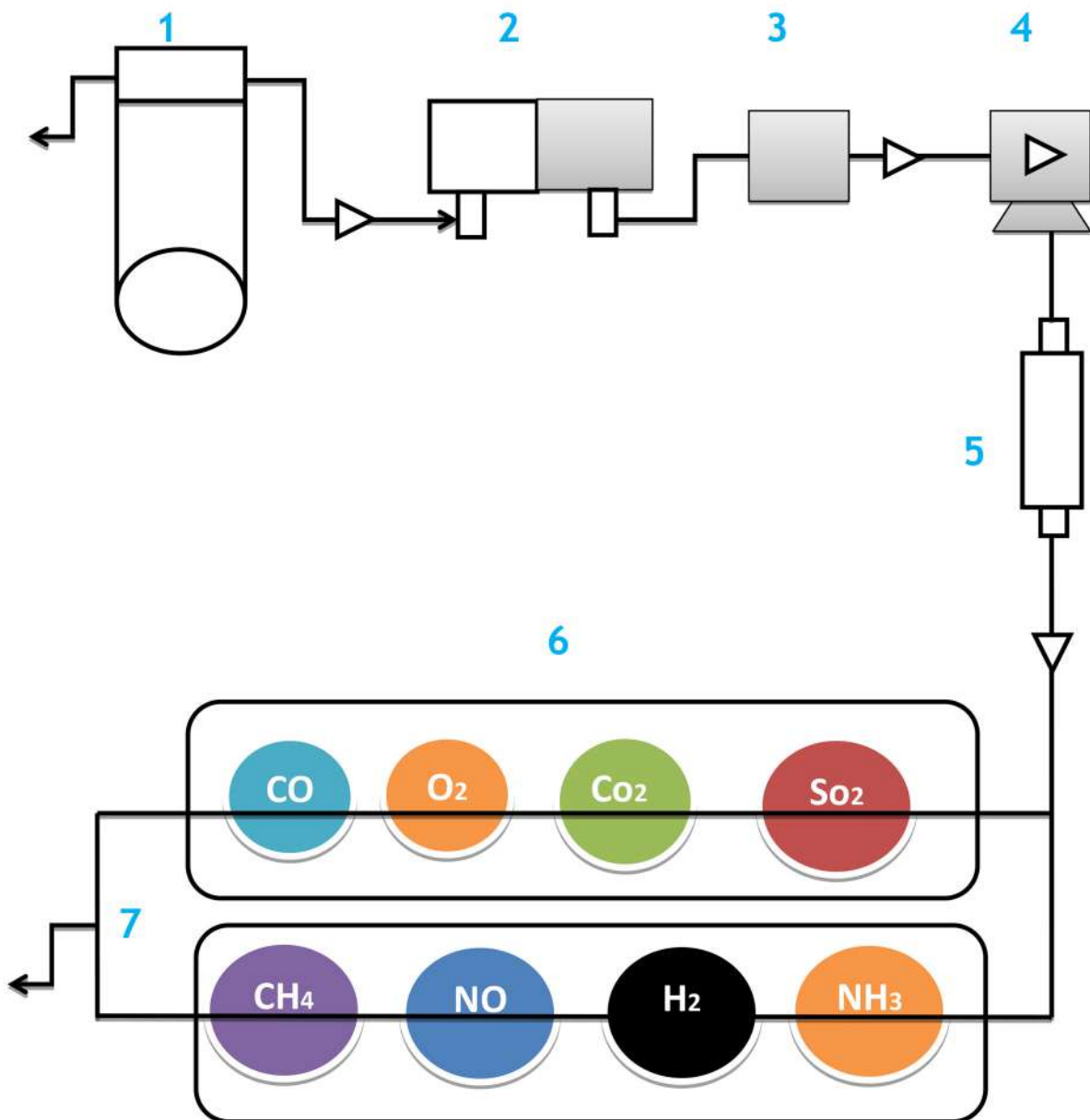
Proven Sensor Technology: Special purpose long life sensors with cross interface filters to achieve high accuracy. Oxygen sensor guaranteed for 4 years and other electrochemical sensor for 2 years.

Instant record of measurement data: The built-in thermal printer provides an immediate record of the measurement data. All essential information including date and time are printed.



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How the analyzer works????



Key

1. Inlet & Water Catch Pot,
2. Particulate Filter,
3. Sample Input,
4. Sample Suction Pump,
5. Sample Expansion Chamber,
6. Gas Sensors manifolds,
7. Sample outlet.

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Integral sample conditioning: The gas sample is drawn into the analyzer via a sample probe and hose connected to the input connection on the front panel of the analyzer. The sample enters the water catch pot where residual water is removed. The sample gas is then passed through a 0.1 micron particulate filter. After removing water and mist or dust the sample gas is routed to the sensor manifolds.

Sensor accuracy and longevity: To maintain sensor integrity, they are purged with fresh air each time the analyzer is switched on or off. For accuracy they are calibrated on 'switch on' with ambient air.

SPCIFICATIONS

Display	full function Alphanumeric/ graphic LCD With backlight, 4 X8 matrix Liquid crystal
Sampling	Through inbuilt Auction Pump
Response time	45 Seconds
Key Pad	Tactile membrane (Integral with display) Functions keys and cursors.
Indicators	LED type for ON (Power), charging, Low batt, Faulty,
Power Supply	230 V AC, 50 Hz.
Sample flow rate	3 to 5 LPM
Data memory	1000 readings for each gas
Printer	Thermal
Alarms	Visual and Audible, 4 alarms
Digital interface	RS 232 and USB Port.
User data	4 X8 matrix Liquid crystal
Case	Rigid Aluminum
Line Filter	Replaceable 5 microns

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Sampling System:-

Sampling System internal Parts
Will change depend on application
And area of use.

- Drain Pot
- Gas filter
- Glass Wool Filter
- Solenoid Valve
- Pump
- Teflon meter
- Flow Meter
- Contractor
- Drain valve
- Heater



Optional Accessories:

- ❖ RS 232 or USB port - data transferring to the PC
- ❖ Data logging -
- ❖ Thermal Printer - for instant reading print out
- ❖ Flow measurement - flue gas velocity, flow rate
- ❖ Draft measurement - internal stack pressure
- ❖ Smoke measurement - readings to Bacharach smoke scales
- ❖ Dual Language display options - English,Hindi,Italian,Spanish

Note: Specifications and Features will vary with application. The above are established and validate during design, but are not to be construed as test criteria for every product. Due to Vasthi' s commitment to research, design and development specifications are subjected to change without notice.



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