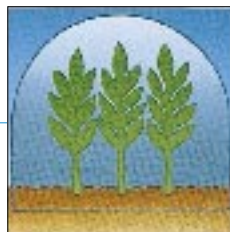
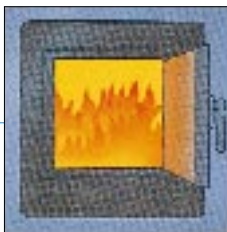
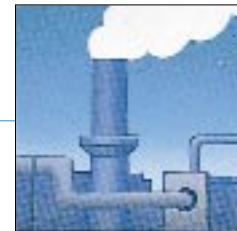


# HORIBA



## Portable Gas Analyzer PG-250



**A single portable analyzer capable of measuring five components with the same methods used by permanent CEMS.**

# The First Advanced Gas Analyzer

The number of applications for gas analyzers (for example, studying global environmental problems resulting from combustion exhaust, research on energy conservation, and research on catalyst and control gas concentrations in process gas) have been steadily growing.

## Major application

- Boilers
- Gas turbines
- Refineries
- Waste incinerators
- Electric utilities

## Major uses

- CEMS backup
- Emissions testing
- Combustion efficiency
- Pollution control systems
- Relative accuracy test audits

## A single analyzer capable of measuring five components

The new Horiba PG-250 is a highly reliable and versatile gas analyzer for compliance testing of NO<sub>x</sub>, SO<sub>2</sub>, CO, CO<sub>2</sub>, and O<sub>2</sub>, housed in a single lightweight and fully portable case. Unlike other portable gas analyzers that rely upon electro-chemical sensors, the Horiba PG-250 utilizes the same measurement principles as a permanently installed CEMS. These include NDIR (pneumatic) for CO and SO<sub>2</sub>; NDIR(pyrosensor)forCO<sub>2</sub>;Chemilluminescence (crossflow modulation) for NO<sub>x</sub>; and Galvanic Cell for O<sub>2</sub> measurements. More importantly, the Horiba PG-250 meets or exceeds the regulatory requirements established by agencies such as the EPA in the U.S. for portable or backup continuous emission monitoring systems.

## Compact and lightweight

The PG-250 is capable of intermittent or continuous measurement of five components simultaneously. The compact and lightweight case, with a built-in carrying handle, is as easy to transport as a suitcase. Thus, the PG-250 is ideal for moving between several stacks at a single plant or for carrying across the country to measure clusters of stack emissions at multiple locations.

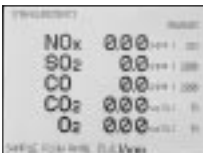
## Built-in sampling unit

The Horiba PG-250 consists of a sample probe, drain separator and gas analyzer. The built-in sampling system consists of a filter, an acid mist catcher, a sampling pump, an electronic cooler for removal of water vapor, a solenoid valve for auto-draining, an NO<sub>x</sub> to NO converter and a scrubber to remove internally generated ozone from the instrument exhaust.

## Simple to operate, easy to read

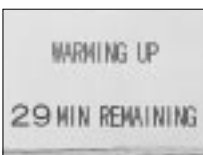
A major feature of the PG-250 is its ease of operation and large, easy-to-read front panel displays. Screens can be selected from a menu or appropriate screens and messages will appear automatically during operation.

### Measurement screen




Concentrations for five components, along with the sample flow rates, are indicated simultaneously on the LCD. Raw measurements are automatically adjusted for oxygen concentration.

### "WARM-UP" screen



Indicates that the power has recently been turned on. When ready, "MEASUREMENT" is displayed.(Forced measurement is possible in the WARM-UP mode.)

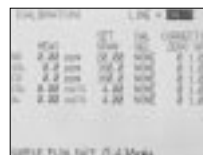


**Drain separator unit**  
Required when the dew point of the sample gas is < 40°C (approximately 7 % H<sub>2</sub>O by volume). This unit attaches to the rear of the instrument at the sample gas inlet.



## Choose the best combination

### Calibration screen



Indicates the analyzers range, and zero and span calibration information for all components with calibration commands.

### Others screens and messages are:

**Parameter setting:** To set O<sub>2</sub> concentration to be used to correct the measured values for NO<sub>x</sub> and SO<sub>2</sub> and to set the measurement arranging time. (10 or 30 sec.)

**Battery drained:** Memory back up battery needs to be replaced.

**Purge:** In process, completed

**Drain discharging**

**Display/Beset** the number of operating days.

### Optional electronic cooler

To measure sample gases that contain greater than 20% by volume concentrations of water vapor, such as those encountered during continuous monitoring of internal gas turbines, boilers, waste incinerators incineration, etc., an optional sample gas pre-conditioning unit, called an "electronic cooler," is available. This accessory is recommended when the instrument will be sampling stack gases continuously for longer than eight hours .

# Analyzer in a Portable Case.



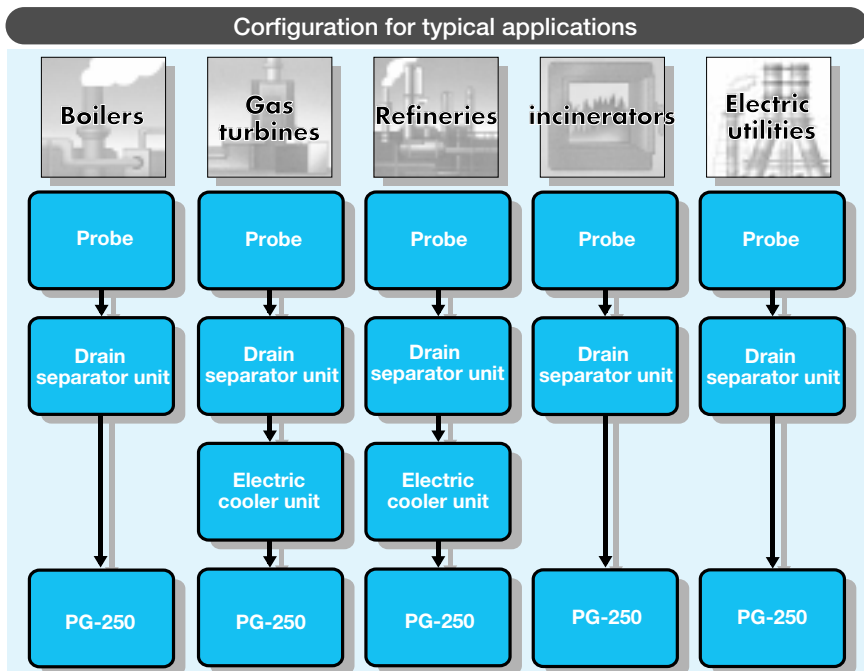
## Electronic cooler unit (optional)

Required when the H<sub>2</sub>O content of the sample gas is < 20% by volume and when the instrument will be sampling stack gases continuously for more than eight hours.

## Cl<sub>2</sub> scrubber

When Cl<sub>2</sub> is included in the sample gas from an incinerator, this scrubber is required to protect the analyzer sample cells and piping from corrosion.

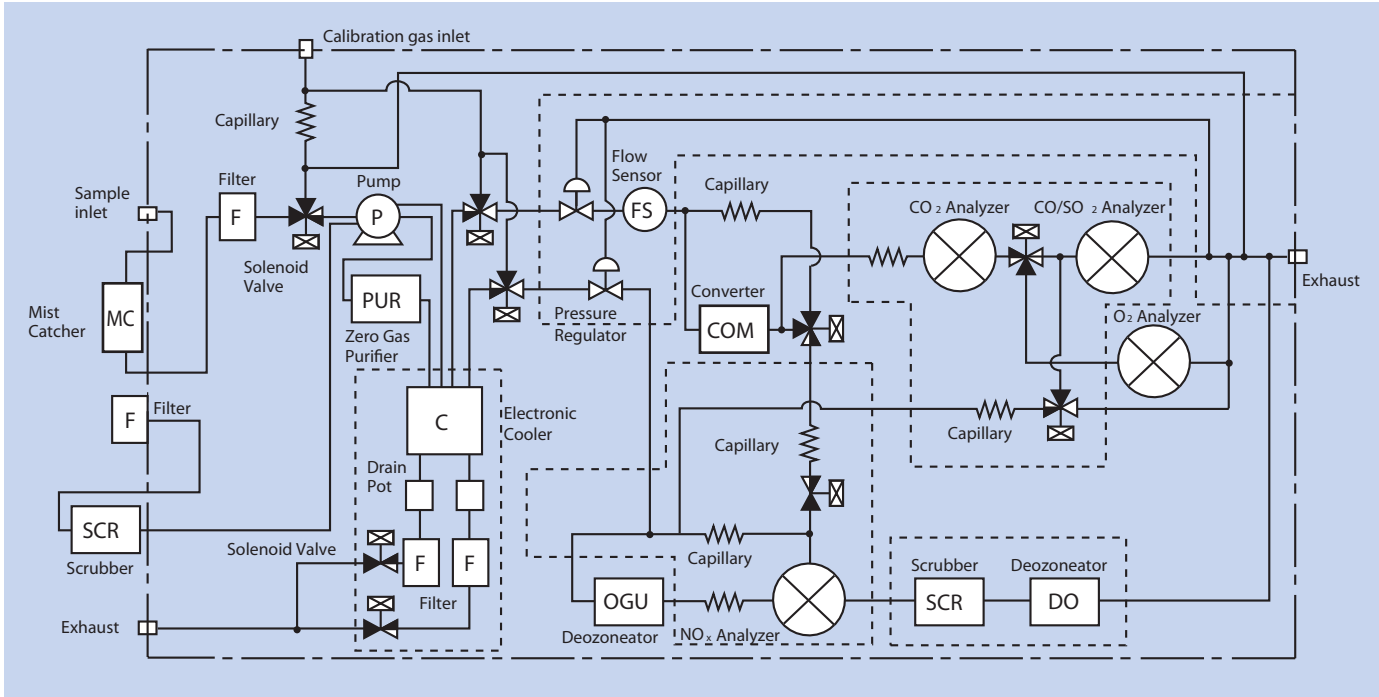
ion for each application.



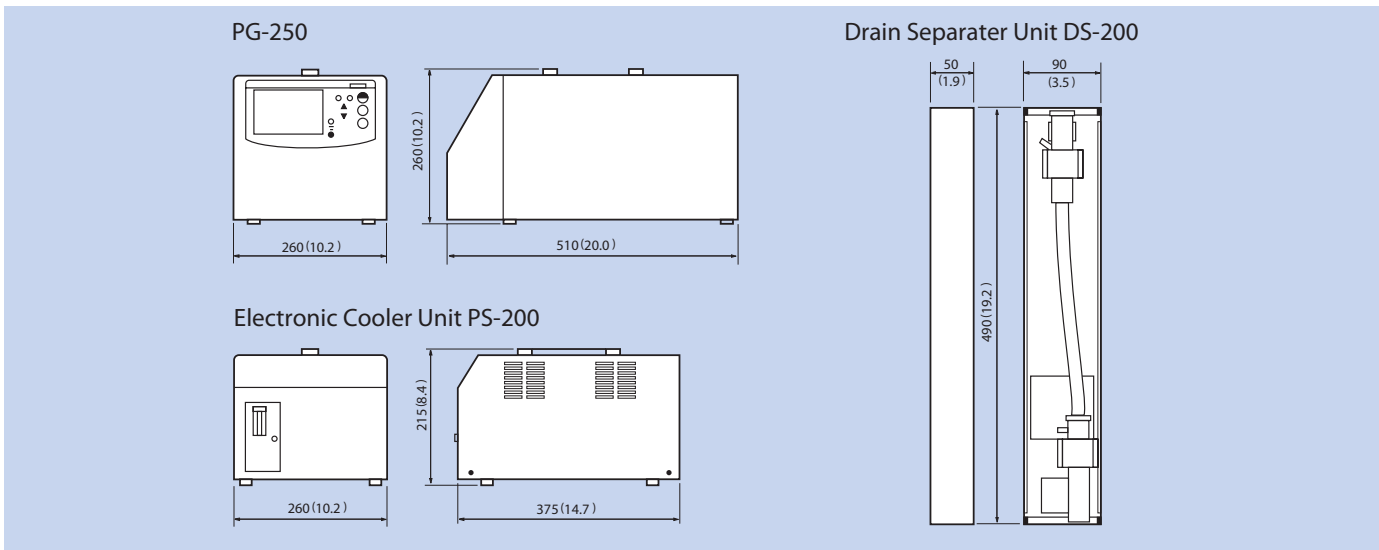
## SPECIFICATIONS

Model	PG-250
Components Measured	NO <sub>x</sub> /SO <sub>2</sub> /CO/CO <sub>2</sub> /O <sub>2</sub> (5 components)
Analysis Principle	NO <sub>x</sub> : Chemiluminescence(CLD) SO <sub>2</sub> /CO/CO <sub>2</sub> : Non-dispersive Infrared Absorption(NDIR) O <sub>2</sub> : Galvanic Cell
Ranges	NO <sub>x</sub> : 0~25/50/100/250/500/1000/2500 ppm 7 ranges SO <sub>2</sub> : 0~200/500/1000/3000 ppm 4 ranges CO : 0~200/500/1000/2000/5000 ppm 5 ranges CO <sub>2</sub> : 0~5/10/20vol% 3 ranges O <sub>2</sub> : 0~5/10/25vol% 3 ranges
Repeatability	±0.5% F.S.( NO <sub>x</sub> : ≤ 100ppm range CO : ≤ 1000ppm range ) ±1.0% F.S.
Linearity	±2.0% F.S.
Drift	±1.0% F.S./day(SO <sub>2</sub> : ±2.0% F.S./day)
Response Time (T <sub>90</sub> )	45 second or less SO <sub>2</sub> Only : 240 second or less
Sample Gas Flow Rate	Approx. 0.4 ℓ /min
Display	Measured value(3 or 4digits)active, range, flow rate
Output	4-20mAdc(Nonisolated), RS-232C interface
Ambient Temperature	5~40 degrees C
Ambient Humidity	85% R.H. or less
Power	100~120V AC, 200~240V AC 50/60Hz
Power Consumption	250 VA/400 VA
Dimensions	260(W)×260(H)×510(D) mm/10.2(W)×10.2(H)×20.0(D)in
Weight	Approx. 17 kg/374.8lb
Sample Gas Condition	Temperature : Less than 40 degrees C H <sub>2</sub> O Content : Saturated or less at ambient temperature Dust : 0.1g/Nm <sup>3</sup> or less Pressure : ±0.98kPa (±100 mm H <sub>2</sub> O)

# SYSTEM DIAGRAM



## DIMENSIONAL OUTLINES (Unit:mm/in )



**⚠ Please read the operation manual before using this product to assure safe and proper handling of the product.**

? The contents of this catalog are subject to change without prior notice, and without any subsequent liability to this company.  
 ? The color of the actual products may differ from the color pictured in this catalog due to printing limitations.

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