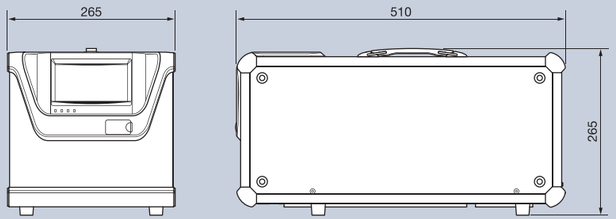
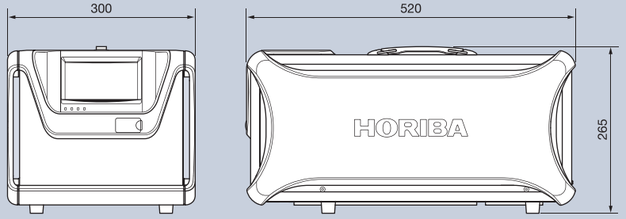
External Dimensions (mm)

● PG-300 Series Analyzer Unit (Side guards excluded)



● PG-300 Series Analyzer Unit (Side guards included)



HORIBA continues contributing to the preservation of the global environment through analysis and measuring technology.

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

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Bulletin:HRE-2854A

Printed in Japan XX-X(SK)00

HORIBA
Process & Environmental

Portable Gas Analyzer
PG-300 Series

Laboratory-precise analyses, anywhere.

PORTABLE GAS ANALYZER

PG-300

NO_X – SO_2 – CO – CO_2 – O_2 – CH_4

IMS
HORIBA is operating Integrated Management System
ISO9001 JQA-0298
ISO14001 JQA-E-80098
OHSAS18001 JQA-OHS0008
ISO13485 JQA-MD0010

Measurement So Easy It's Almost Instinctive

Laboratory-level precision in a portable unit for real-world measurements in the field.

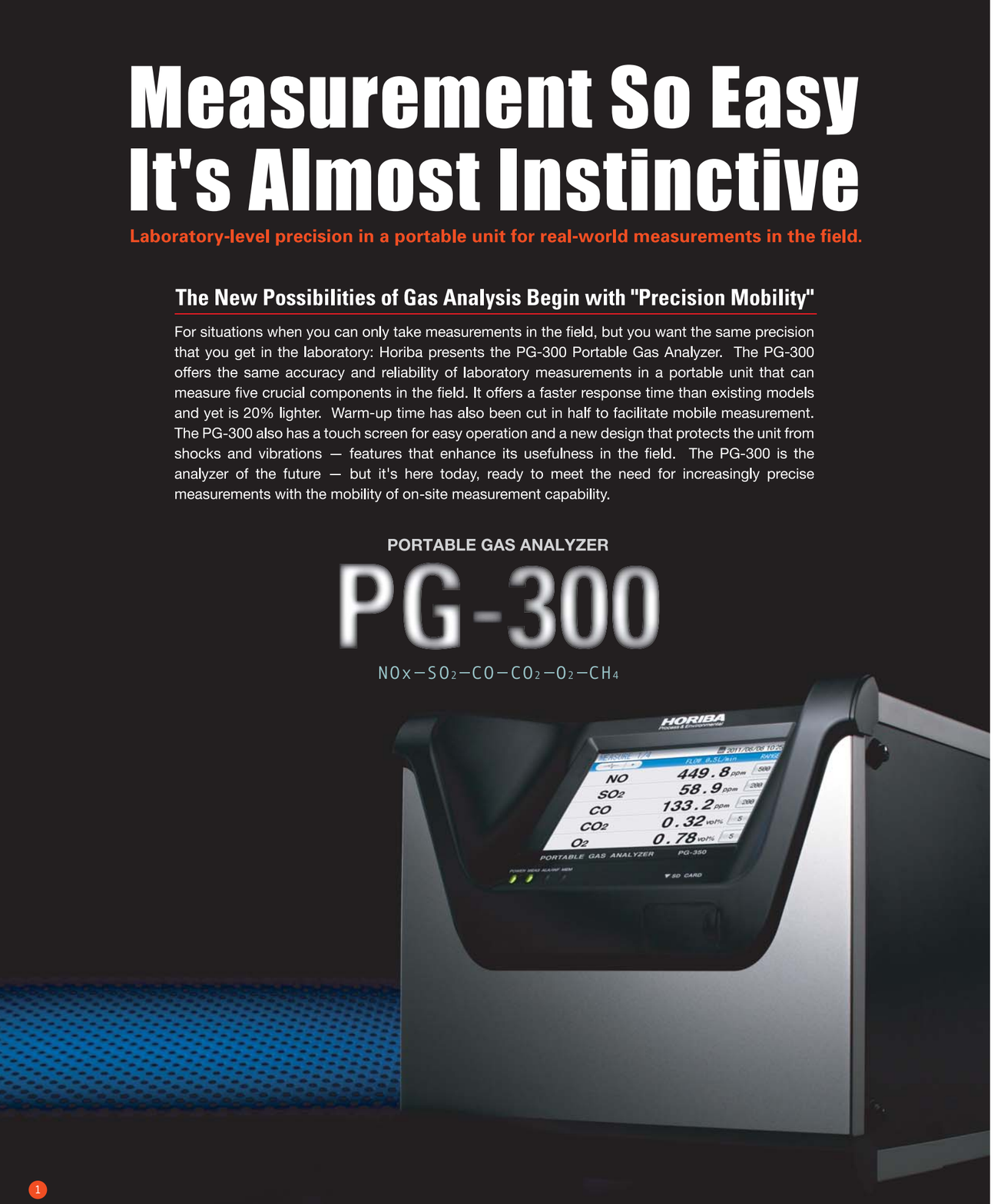
The New Possibilities of Gas Analysis Begin with "Precision Mobility"

For situations when you can only take measurements in the field, but you want the same precision that you get in the laboratory: Horiba presents the PG-300 Portable Gas Analyzer. The PG-300 offers the same accuracy and reliability of laboratory measurements in a portable unit that can measure five crucial components in the field. It offers a faster response time than existing models and yet is 20% lighter. Warm-up time has also been cut in half to facilitate mobile measurement. The PG-300 also has a touch screen for easy operation and a new design that protects the unit from shocks and vibrations — features that enhance its usefulness in the field. The PG-300 is the analyzer of the future — but it's here today, ready to meet the need for increasingly precise measurements with the mobility of on-site measurement capability.

PORTABLE GAS ANALYZER

PG-300

NOx–SO_2–CO–CO_2–O_2–CH_4



Functions

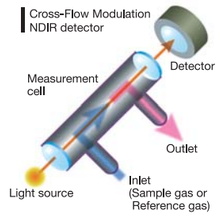
Advanced measurement needs met with advanced functions.

- Expansion of Cross-Flow Modulation type detector
- Capable of measuring methane (CH_4)
- Shorter warm-up time
- Timer function
- Ethernet compatible
- Capable of remote operation

The PG-300 achieves measurement performance equal to laboratory equipment in a highly portable package.
The Cross-Flow Modulation type analyzers improve reliability and the addition of CH_4 analyzer greatly expands applicability.
With only half the warm-up time over the previous generation PG, operational performance has dramatically increased.
A new timer function has been added for saving preparation time and quick start.

Cross-Flow Modulation advanced efficiency of NDIR analysis

In PG-300, Cross-Flow Modulation is applied to SO_2, CO, and new CH_4 analyzer for Non-Dispersive Infrared Absorption (NDIR) method. With Cross-Flow Modulation NDIR method, sample gas and reference gas flow into a single measurement cell switching one by one, and it brings about advantages that no optical adjustment is required, the zero point is kept stable, and the sample cell remains clean and it reduces span drift. The equipments will be kept safe for a long time as well. Cross-Flow Modulation Chemiluminescence detection method is already introduced for NOx analyzer in previous model and has the same effects as aforesaid analyzers.



Capable of measuring methane (CH_4) for expanded options

Improving on previous models, the new PG-300 is equipped with a methane (CH_4) analyzer that is ideally suited for many current and emerging applications such as biomass combustion.

Ethernet communication facilitates data management*1

Standard Ethernet interface for connection to LAN environments, enabling real-time data import.

Collecting data over LAN network*1

Once the network connection such as LAN has been set up, data can be uploaded while you are staying at the office or the laboratory, a distance away from where PG-300 is placed.

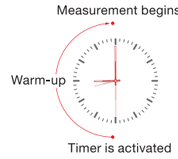
*1 Requires separate software.

Warm-up time has been cut in half, greatly reducing the instrument's ready-to-measure time

Previous models required an hour of warm-up time. The PG-300 has been reduced to 30 minutes on the PG-300, greatly reducing the time required for measurement preparation.

Timer function enables automatic instrument start and sleep modes

For example, setting the PG-300's automatic start time 30 minutes ahead of when measurements are needed eliminates your need to wait for the instrument to warm up; it will be ready when you are. There is also a sleep mode that reduces power use when the unit is idle.



Reduced response time for SO_2 analyzer

The response time of the SO_2 analyzer is faster than on previous models, increasing the overall measurement performance.

Field × Lab

Rugged Lightweight Design

To provide complete support for measurements in the field, the PG-300 body has been made up to 20% lighter than previous models.
Side guards* are available to prevent from unexpected impacts during transport.
Designed in this way for easy and safe transport, the PG-300 provides full support for measurements in the field.

*Please see the back of the brochure.

Lighter than existing models to make transport easy.

Easy Operation

Operation is simple and intuitive, making it easy to perform measurements in the laboratory or the field.

●SD memory card slot ●Color LCD touch screen ●Screen capture function ●On screen guidance ●Color trend graph

Simple, intuitive operation makes on-site measurement easy. The PG-300 has a highly visible and easy to operate LCD color touch screen.
Data is readily saved on an SD memory card for easy transfer to a PC.
The unit is equipped with a screen capture function as a standard feature, enabling necessary data to be saved on the spot.
There is also an intuitive on screen guidance function, when the operator's manual is not at hand.

Equipped with an SD memory card slot to enable data to be saved immediately

SD memory card slot accessed from the front of the instrument enables necessary data to be saved on the spot in the universal CSV format.

The SD card slot is located on the front of the unit for easy access.

Screen capture function enables data to be saved immediately as a bitmap image onto the SD memory card.

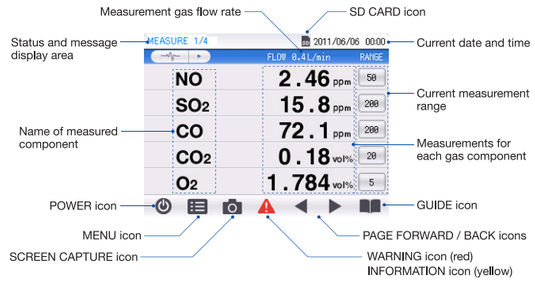
No paper or pen required - simply touch the SCREEN CAPTURE icon and a screen shot is stored in memory.

On screen guidance function allows you to confirm review operating procedures instantly

The simple guidance function provides assistance when you forget how to perform an operation. You can review regular operational procedures or important points right on the screen.

LCD touch screen improves ease of operation

All operations, including calibration, measurement and saving on-screen data, can be performed on the touch screen. The high visibility color display makes it easy to check the status.

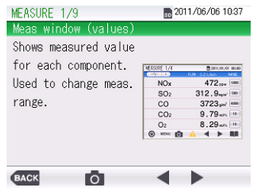


Easy real time analysis using the color trend graph

There is a convenient color trend graph function, enabling gas component trends as a function of time to be confirmed at a glance.

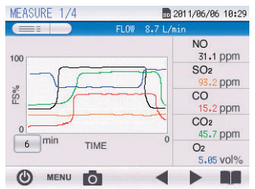
[Sample display screens]

When you press the GUIDE button...

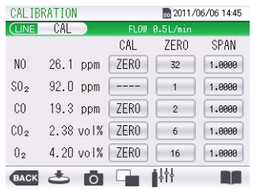


... guidance appropriate for the currently displayed screen appears.

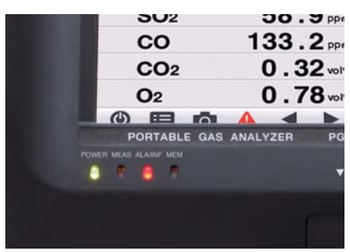
[Color trend graph]



[Calibration screen]



Note: Calibration requires separately purchased calibration gas and pressure regulator.



●Unit status is clearly displayed on the LEDs on the front of the unit.

●Easy-to-operate unit yields precision analysis results.

●The touch screen on the front makes operation easy.

Analyzer Specifications

Type of Analyzers	2 component Analyzer		3 component Analyzer			4 component Analyzer	5 component Analyzer	2 component Analyzer	4 component Analyzer
Model	PG-320	PG-325	PG-330	PG-335	PG-337	PG-340	PG-350	PG-324	PG-344
Components Measured	CO/CO_2	NOx/O_2	$CO/CO_2/O_2$	$NOx/CO/O_2$	$NOx/SO_2/O_2$	$NOx/CO/CO_2/O_2$	$NOx/SO_2/CO/CO_2/O_2$	CH_4/CO_2	$CH_4/CO/CO_2/O_2$
Analysis Principle	NOx: Cross-Flow Modulation Chemiluminescence Detection Method SO_2,CO,CH_4 : Cross-Flow Modulation Non-Dispersive Infrared Absorption Method CO_2 : Non-Dispersive Infrared Absorption Method O_2 : Galvanic Method, Paramagnetic Method(only in EU area)								
Ranges	NOx : 0-25/50/100/250/500/1000/2500 ppm SO_2 : 0-200/500/1000/3000 ppm CO : 0-200/500/1000/2000/5000 ppm CO_2 : 0-10/20/30 vol% O_2 : 0-5/10/25 vol%							CH_4 : 0-2000/5000 ppm CO : 0-2000/5000 ppm CO_2 : 0-5/10/20 vol% O_2 : 0-5/10/25 vol%	
Repeatability	±0.5% of Full scale (NOx : ≧ 100 ppm range / CO : ≧ 1000 ppm range) ±1.0% of Full scale (Except above)							±1.0% of Full scale	
Linearity	±2.0% of Full scale								
Drift	±1.0% of Full scale / day (For SO_2 analyzer only : ±2.0% of Full scale / day							±1.0% of Full scale / day	
Response Time (T_{90})	Analyzers except SO_2 analyzer : 45 sec. or less (From sample inlet, response time setting of electrical system : 10 sec.) SO_2 analyzer : 180 sec. or less (From sample inlet, response time setting of electrical system : 10 sec.) Moving average selectable (10 or 30 sec.)								
Sample Gas Flow Rate	Approx. 0.5 L/min.								
Display	Measurement (3 or 4 digit display), range, flow rate, etc.								
Output	DC 4-20 mA (non-insulated) / Ethernet								
Warm-up Time	With 30 min. warm-up, ±2.0% of Full scale / 2 hours								
Data Saving	SD memory card								
Ambient Temperature	0-40°C								
Ambient Humidity	85% R.H. or less								
Power	AC 100 V - 120 V, 220 V - 240 V								
Power Consumption	Approx. 220 VA in a steady state								
Dimensions	260 (W) x 510 (D) x 265 (H) mm (Without side guards)		300 (W) x 520 (D) x 265 (H) mm (With side guards)						
Weight	Approx. 14 kg (Without side guards)		Approx. 15 kg (With side guards)						
Sample Gas Conditions	Temperature : Less than 40°C, H_2O Content : Standard or less at ambient temperature, Dust : 0.1 g/m³ or less, Pressure : ±0.98 kPa								

• Zirconia O_2 analyzer is available. Please contact Horiba for the details.

Standard Accessories

Part Name	Specifications	Quantity
Filter element	For reference line*	24
Signal cable	For analog output (2 m) with connector	1
Power cord	2.5 m	1
Tube	ϕ6/ϕ4PTFE tube 0.12 m (for mist catcher short)	1
Tube	ϕ6/ϕ4PTFE tube 5 m (for sample)	1
Tube	ϕ9/ϕ5 Imron tube 5 m (for exhaust)	1
Tube	ϕ9/ϕ5 Imron tube 1 m (for drain discharge)	1
Joint	ϕ6 straight (for sample tube)	1
Cover	Dust cover (for storage)	1
SD memory card	512 MB	1

• Separate tubing and joint are required if a pretreatment unit is added.
* Differs depending on model.

Replacement parts

Replacement part intervals assume 8 hours of operation per day.
Replacement interval may be more frequent depending on measurement gas conditions and use conditions.

[Consumable Items]

Name	Replace Every (general guideline)	Notes
Mist catcher	3 months	MC-025
Scrubber	3 months	For reference line*
Air filter element	2 weeks	For reference line*

* Differs depending on model

[Replacement Parts]

Name	Replace Every (general guideline)	Notes
Pump	1 year	Replace when broken
NOx converter catalyst	1 year	For NOx analyzer*
Zero gas purifier unit catalyst	1 year	*
Ozone generator	1 year	For NOx analyzer*
Deozonizer	1 year	For NOx analyzer*
CR2032 battery	5 years	For clock backup
Galvanic O_2 cell	1 year	Replace when broken*

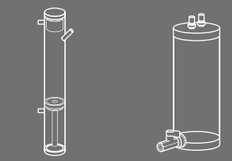
* Differs depending on model

Options

Additional optional components expand the PG-300 portable analyzer capabilities.

Drain separator unit
Drain pot unit

When the gas sample includes moisture ranging from ambient temperature saturation to 40 °C saturation, a Drain Separator and Drain Pot are installed at the stage before the analyzer unit.



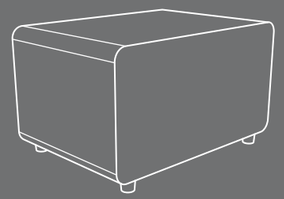
Drain separator　Drain pot

Drain separator unit / Drain pot unit specifications

Model		DS-300 (drain separator)	DP-200 (drain pot)
Sample conditions (at feed port)	Temperature	0 - 40 °C	
	Moisture	Ambient temperature saturation ~ 40 °C saturation	
	Dust	0.1 g/m³ or less	
	Pressure	±0.98 kPa	±4.9 kPa

Electronic cooler unit

When the gas sample includes moisture exceeding 40 °C saturation, or when conducting continuous measurement (for five days or less), a thermoelectric cooler is installed at the stage before the analyzer unit. The electronic cooler unit can also accommodate low-temperature SO_2 measurements.



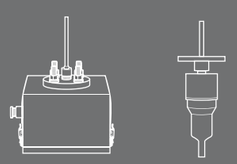
Electronic Cooler Unit Specifications

Model	PS-300
Material of sections contacting gas	SUS, PVC, PTFE, FKM, PVDF
Sampling flow rate	Approx. 2 ~ 3 L/min
Dehumidifying capacity	15 °C
Ambient temperature	0 ~ 40 °C
Ambient humidity	85% or less
Power	AC100 V~240 V
External dimensions	260(W) x 375(D) x 223 (H) mm
Mass	Approx. 10 kg
Sample conditions	Temperature: Ambient temperature, Dust: 0.1 g/m³ or less, Moisture: 20 vol% or less, Pressure: ±4.9 kPa

[Cl_2 scrubber] (optional)
The Cl_2 scrubber can be built into the electronic cooling unit as an option. It is used to prevent corrosion of the cells, tubes and other internal components when the gas analyzer is operated at waste incineration facilities or in other situations where the gas sample includes Cl_2.

Primary side filter probe

Either of two types may be selected depending on use.



Flue probe　Simple probe

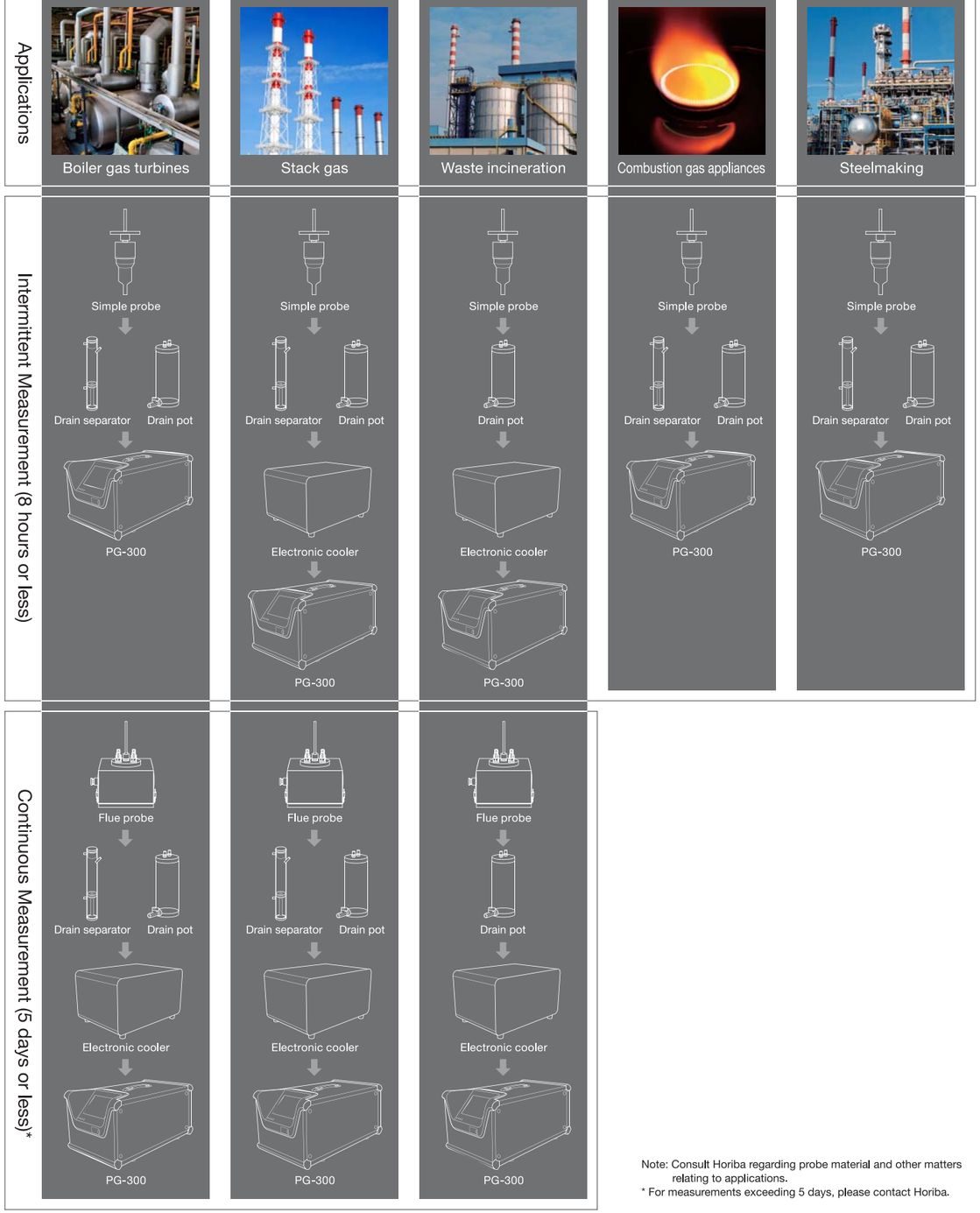
Primary side filter probe specifications

Model		Simple probe	SE3 (flue probe)
Probe length (standard)		10 cm	1 m
Sample conditions (at feed port)	Temperature	0 - 50 °C*	0 - 120 °C*
	Moisture	40 vol% or less	
	Dust	0.1 g/m³ or less	
	Pressure	±2.94 kPa	

*At flange inlet
Note:
- Please contact Horiba if the analyzer will be used in environments in which the temperature exceeds 120 °C.
- Please contact Horiba in case of use under the environmental that the pressure condition is other than ±2.94 kPa.

Please select the ideal combination according to your needs.

Sample Preprocessing Unit (optional) Uses



Note: Consult Horiba regarding probe material and other matters relating to applications.
* For measurements exceeding 5 days, please contact Horiba.