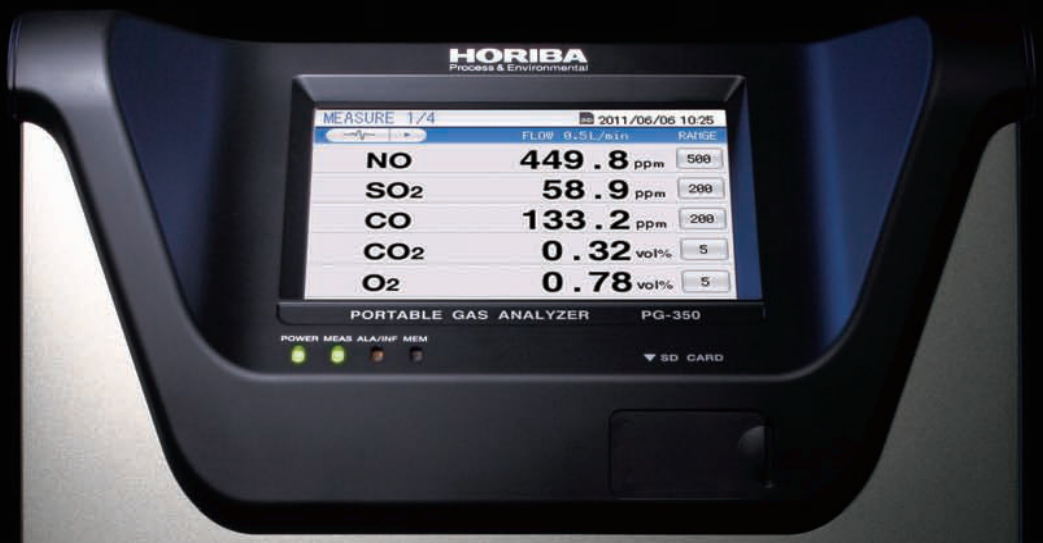
HORIBA
Process & Environmental

PORTABLE GAS ANALYZER
PG-350 E

Laboratory-precise analysis, anywhere.



PORTABLE GAS ANALYZER

PG-350 E

NO_X - SO_2 - CO - CO_2 - O_2

According to: DIN EN 15267 - 3, DIN EN 14181

Approved as Standard Reference Method (SRM) for:

CO (DIN EN 15058)
O_2 (DIN EN 14789)
NOx (DIN EN 14792)

ISO9001 JQA-0298 · ISO14001 JQA-E-90059 · IMS HORIBA is operating Integrated Management System · OHSAS18001 JQA-OH0068 · 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-350 E Portable Gas Analyzer. The PG-350 E 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-350 E 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-350 E 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-350 E

NOx—SO_2—CO—CO_2—O_2

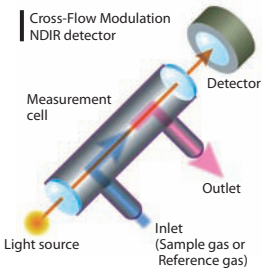
Functions Advanced measurement needs met with advanced functions.

■ Expansion of Cross-Flow Modulation type detector
■ Shorter warm-up time ■ Timer function ■ Ethernet compatible ■ Capable of remote operation

The PG-350E achieves measurement performance equal to laboratory equipment in a highly portable package.
The Cross-Flow Modulation type analyzers improve reliability.
With only half the warm-up time over the previous generation PG, operational performance has exceptionally 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-350E, Cross-Flow Modulation is applied to SO_2 and CO 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.



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.

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-350E is placed.

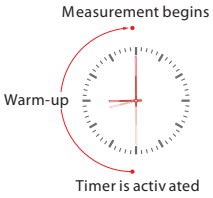
*1 Requires separate software.

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-350E has been reduced to 30 minutes on the PG-350E, greatly reducing the time required for measurement preparation.

Timer function enables automatic instrument start and sleep modes

For example, setting the PG-350E'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.



Field × Lab

Rugged Lightweight Design

To provide complete support for measurements in the field, the PG-350E 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-350E provides full support for measurement 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-350E 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.

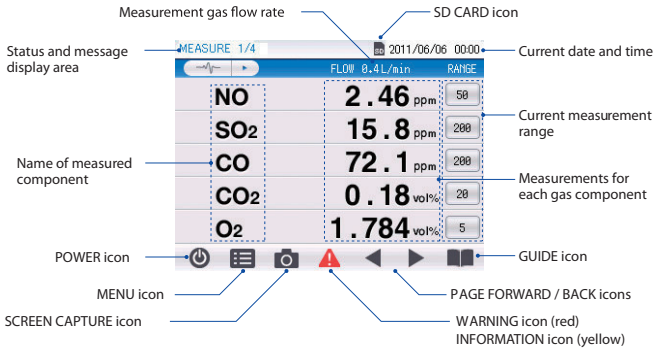
No paper or pen required - simply touch the SCREEN CAPTURE icon and a screen shot is stored in memory.

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.

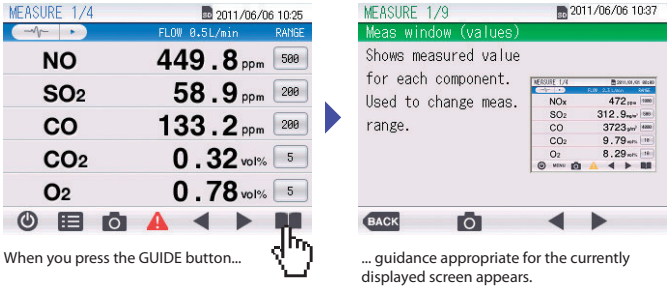
All operations, including calibration, measurement and saving on-screen data, can be performed on the touch screen. The high visibility color display makes it easy to check the status.



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.

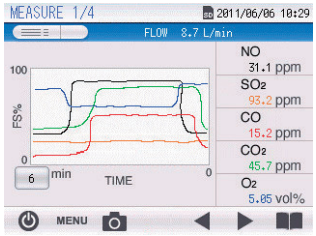
[Sample display screens]



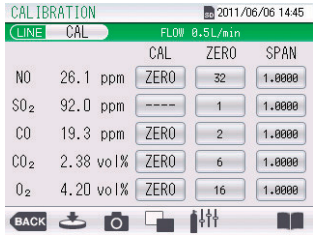
When you press the GUIDE button...

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

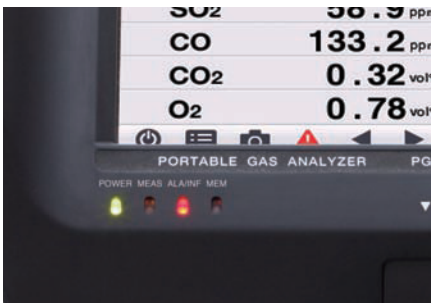
[Color trend graph]



[Calibration screen]



Note: Calibration requires separately purchased calibartion 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	5-components Analyzer
Model	PG-350 E
Components Measured	NOx/SO_2/CO/CO_2/O_2
Analysis Principle	NOx: Cross-Flow Modulation Chemiluminescence Detection Method (CLA) SO_2, CO: Cross-Flow Modulation Non-Dispersive Infrared Absorption Method (NDIR) CO_2 : Non-Dispersive Infrared Absorption Method (NDIR) O_2 : Paramagnetic Method
Reference Standard	DIN EN 15267 - 3, DIN EN 14181, DIN EN 15058 (CO) DIN EN 14789 (O_2), DIN EN 14792 (NOx)
Ranges	NOx : 0-25/50/100/250/500/1000/2500 ppm SO_2 : 0-50 /100/200/ 500 ppm CO : 0-60 /100/200/ 500/ 1000 ppm CO_2 : 0-10/20/30 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 as specified above)
Linearity	±2.0% of Full scale
Drift	±1.0% of Full scale / day (For SO_2 analyzer only : ±2.0% 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	DC4-20 mA (non-insulated), LAN or 0 V to 1 V DC (non insulated) (optional), RS-232
Warm-up Time	With 30 min. warm-up, ±2.0% of Full scale / 2 hours
Data Saving	SD / SDHC memory card
Ambient Temperature	5-40°C
Ambient Humidity	Maximum relative humidity 80%, for temperatures up to 31°C
Power	AC 100 V - 240 V 50 Hz/60 Hz
Power Consumption	160 VA at regular time, maximum 220 VA
Dimensions	300 (W) x 520 (D) x 265 (H) mm (With side guards)
Weight	Approx. 16 kg (With side guards).
Sample Gas Conditions	Temperature : Less than 40°, Moisture: below the ambient temperature saturation, Dust : 0.1 g/m^3 or less, Pressure : ±0 98 kPa, Non-existence of any gas that reacts with corrosive gas or measured gas.

The European Standard is the Standard Reference Method (SRM) for periodic monitoring and for the calibration or control of Automatic Measuring Systems (AMS), permanently installed on a stack, for regulatory or other purposes. The SRM method for O_2 is paramagnetic, for NOx it is chemiluminiscense method and for CO it is None Dispersive Infrared Radiation (NDIR).

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	φ 6/φ 4PTFE tube 0.12 m (for mist catcher short)	1
Tube	φ 6/φ 4PTFE tube 5 m (for sample)	1
Tube	φ 9/φ 5 Imron tube 5 m (for exhaust)	1
Tube	φ 9/φ 5 Imron tube 1 m (for drain discharge)	1
Joint	φ 6 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.

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

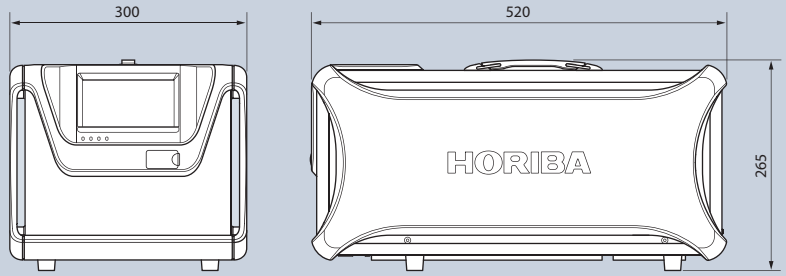
[Replacement Parts]

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	For NOx analyzer
Ozone generator	1 year	For NOx, CO, SO_2 analyzer
Deozonizer	1 year	For NOx analyzer
CR2032 battery	5 years	For clock backup

* Differs depending on model

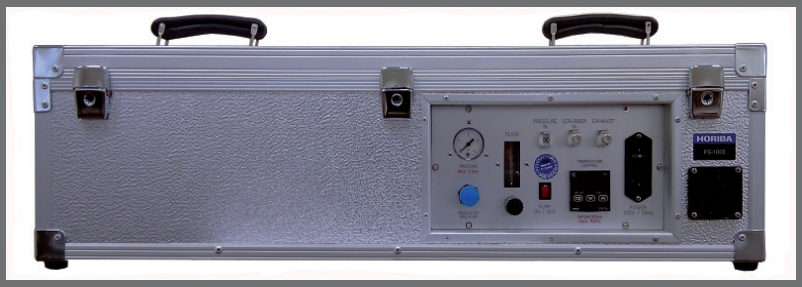
External Dimensions (mm)

● PG -350 E Analyzer Unit (Side guards included)



Accessories

☐ Transport case



☐ PD-100E Portable Permeation Dryer

☐ µ I/O Expander

☐ µ I/O Expander, incl. GPRS, EDGE, UMTS

For further information on the displayed items, or other available accessories, please contact our local customer service or our local representative.

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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