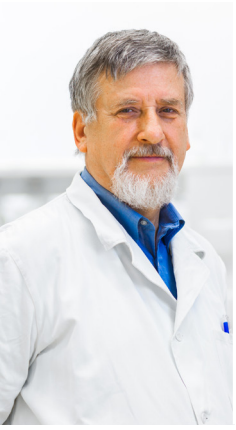
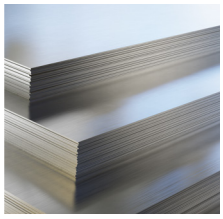


EMIA Series

Carbon/Sulfur Analyzer

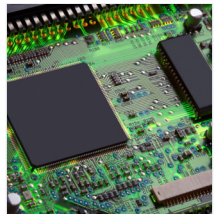














Simple to operate, small dust volume and low maintenance.

EMIA Series

Carbon/Sulfur Analyzer

The EMIA-Pro and EMIA-Expert Carbon/Sulfur Analyzer Series is based on HORIBA's widely respected expertise in Non-Dispersive Infrared (NDIR) technology.

The EMIA Series

Standard Model:

EMIA-Pro

Enables everyone to become a professional analyst

The EMIA-Pro is the most advanced system available. The key features are:

1. **Long MTBM (Mean Time Between Maintenance)**
2. **High Throughput**
3. **Fast and Easy Maintenance**
4. **Advanced Operation Software**



EMIA-Pro

High Performance Model:

EMIA-Expert

For expert analysts demanding the greatest accuracy and precision in carbon and sulfur analysis

Advanced Functions for the EMIA-Expert:

- **High Performance Purifier Unit for Carrier Gas**

  Enables the measurement of ultra-low carbon concentration with high accuracy by eliminating hydrocarbon impurities in the carrier gas.

- **High Performance Heating Filter Unit**

  Samples which are moist or that generate water during analysis may, cause a small error in the analysis of sulfur. This is due to the vapor absorbing the SO_2 gas. Using the heating filter, the absorption of SO_2 by moisture is prevented, thereby ensuring accurate sulfur analyses.



EMIA-Expert

Options

- **Auto-sampler unit**

  Automated crucible loading and disposal unit. Up to 20 crucibles may be loaded and analyzed automatically. A user needs to place the crucible onto the auto sampler manually.



- **Crucible pre-heating unit**

  The FK-100 crucible pre-heating unit, with the automatic transportation function, heats ceramic crucibles at 1100 ˚C 10 min. prior to analysis.



*This product does not contain major certification including CE. Contact us whether this product is available in your country.

- **HT-03 halogen trap unit**

  Some samples included halogen elements, which can damage the detector, and decrease sensitivity. This unit collects fluorine and chlorine of halogen elements in the sample gas.



The Key Features of the EMIA Series

The new generation EMIA Series has been developed based on the concepts of **reliability, user-friendliness and high throughput**. The instruments build upon the high reliability and functionality from the former EMIA-V2 Series, with improved cleaning performance, durability and maintenance to ensure efficient measurements in a user-friendly package. Shortened measurement cycle times, long term precision, and accuracy help improve productivity.

Long MTBM (Mean Time Between Maintenance)



Dust can be a major cause of decreased analytical accuracy, but HORIBA' s patented*, newly-developed cleaning mechanism clears the dust on the filter. Thanks to the innovative HORIBA proprietary auto-cleaning design, the EMIA Series offers this MTBM system which is able to run 200 samples without furnace cleaning.

	Standard Specification	Before measurement	After 200 measurements
Leakage Pressure	≤ 1.0 kPa	0.23 kPa	0.29 kPa
RSD for Carbon	≤ 1%	-	0.39%
RSD for Sulfur	≤ 1.5%	-	1.21%

*Patent applied for US: 9778148, 10379017, EP: 3037814B, 3064938B

High Throughput

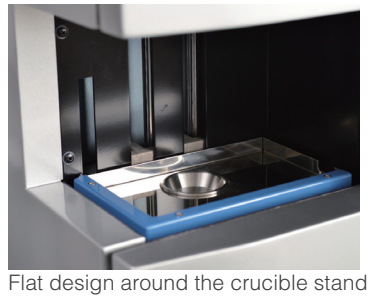


With the latest innovations (HORIBA patent* (US/EP)), the EMIA Series can complete one measurement cycle (measurement, display result and cleaning process) in 70 seconds (i.e. about 50 samples/hour).
Both the EMIA-Pro and EMIA-Expert achieve the highest throughput in the market*.

*Patent applied for US: 9778148, 10379017, EP: 3037814B, 3064938B

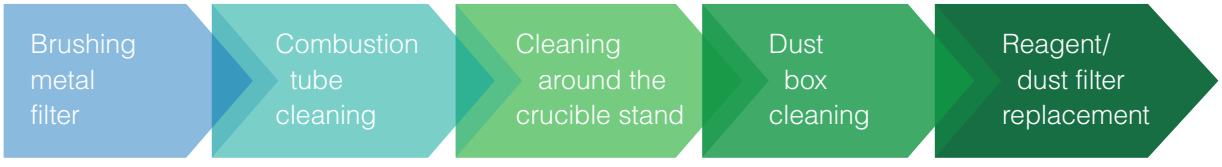
Fast and Easy Maintenance

With the latest innovations, the cleaning time for the EMIA Series instruments is typically half that of conventional models. The flat design around the crucible stand, and simple design around the furnace, also simplify user access for cleaning.



Flat design around the crucible stand

Maintenance Cleaning Contents





1/2
Maintenance
Time

Advanced Operation Software

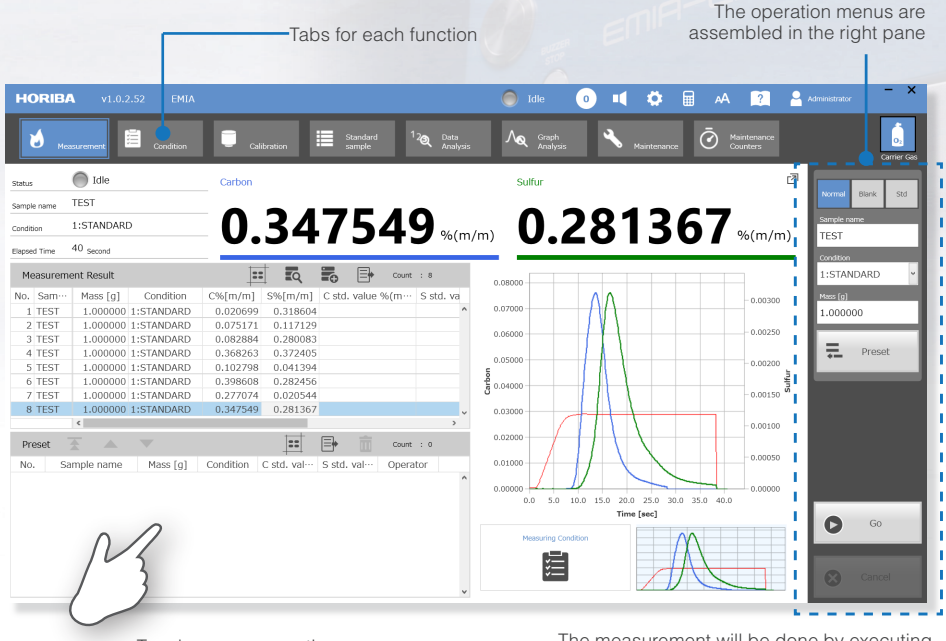
Advanced User-Friendly Interface

The layout, operation menus and functions have been designed to highlight our 'easy-to-use' promise.

Touch screen operation with a PC enables intuitive and visual operation.

A self-diagnostic monitor checking capability has been included to monitor the status of the connected device, along with an alarm function and 3 expanded navigators to facilitate the daily operation.

The new software platform enables everyone to operate the EMIA Series without long hours of software training.



Touch screen operation (Optional)

The measurement will be done by executing the menus in descending order

Enhanced Operator Support

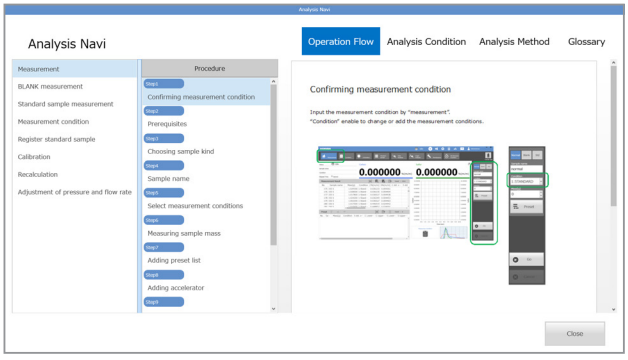
Analysis Navigator

One-Click Operation Mode

This function uses the recommended best measurement flow and analysis conditions based on our experience.

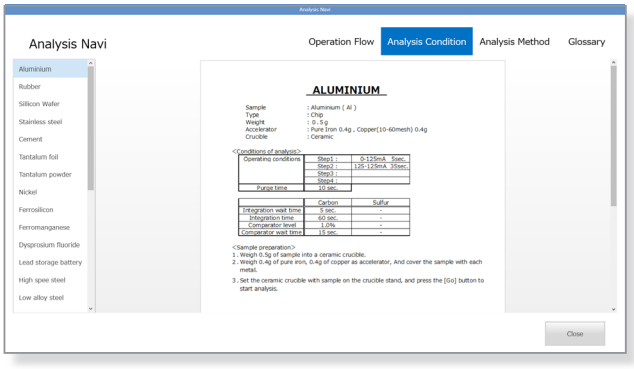
Operation Flow

"Operation Flow" in the Analysis Navigator shows the proper measurement flow and guides the operator through the process to get results with good reliability and accuracy.



Analysis Condition

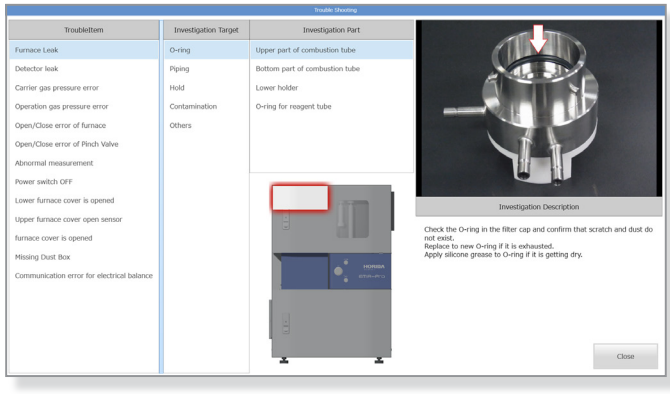
Just by choosing the sample by name, the software sets up the analysis conditions automatically, so the operator does not need to set any conditions.



Troubleshooting Navigator

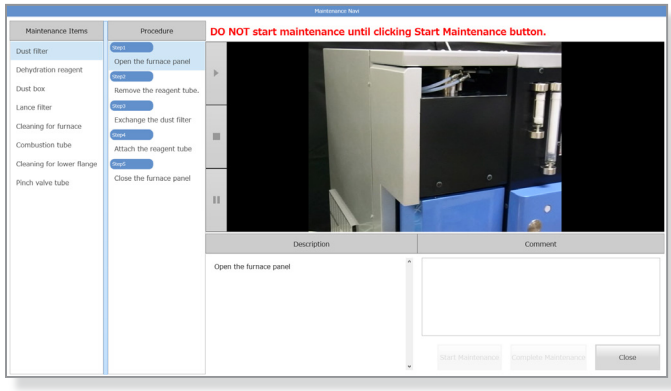
Automatic Diagnosis System

When any fault occurs, this function pinpoints the location automatically, and notifies the operator with the recovery procedure. Thus, it saves the user unnecessary downtime and running expense.



Maintenance Navigator

Periodic preventive maintenance is essential for accurate performance of the EMIA Series. In this Navigator, the daily maintenance menus are listed and the videos and photos of the maintenance procedures are displayed just by clicking the menus.



The Industry-proven NDIR Technology of HORIBA

• *Long history and global standard technology*

- Since 1957, when HORIBA launched the first analyzer based on NDIR technology, we have pioneered NDIR analyzers and provided new and added value to the applications. This sophisticated NDIR technique has been employed on many of our analyzers, and we have provided solutions for a wide range of applications. Some HORIBA analyzers that use this advanced NDIR technique are recognized as the global standard for emission gas measurement systems.

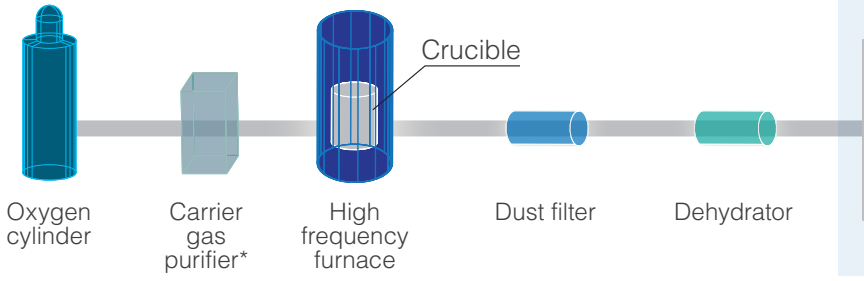
• *Proprietary HORIBA technology*

- The NDIR detector is the key element for accurate measurement of our carbon/sulfur analyzers. This detector is designed by highly skilled engineers, and manufactured with very strict quality control processes.



Detector Polishing

Principle of Measurement



Highly accurate semiconductor-type Non Dispersive Infrared Detectors (NDIR)

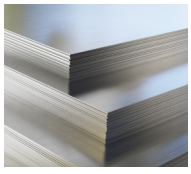
*Optional for EMIA-Pro, Standard for EMIA-Expert

Application Examples



Steel Products

Steel plate/sheets/bar/pipe,
Automotive steel sheet,
Casting iron,
Steel slag, etc.



Non-ferrous Alloy

Copper,
Nickel,
Aluminum,
Zinc,
Tungsten carbide



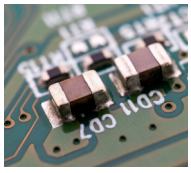
Mineral

Cokes,
Limestone,
Coal,
Silicon,
Rare metals



Energy

Electrode material of
Li-Ion battery,
Si wafer for solar cell,
SiC for power devices



Electrical Material

Capacitor,
Solder,
Target material,
Bonding wire,
Filler



Others

Catalyst,
Rubber,
Carbon black,
Silica,
Cement

Other Products

EMGA Series

Oxygen/Nitrogen/Hydrogen Analyzer

High-speed measurements on oxygen, nitrogen and hydrogen content down to ppm level in inorganic materials, such as steel products, non-ferrous alloys, electrical materials, etc.



EMIA-STEP

Carbon/Sulfur Analyzer (for Temparature Rise Analysis)

Unique sealed tube furnace enables anyone to analyze by temperature rise step analysis and trace gas analysis. Electrical heating enables to expand the application such as steel, non-ferrous alloys, minerals, electronic materials, catalyst, rubber, etc.



XGT-9000 Series

X-ray Analytical Microscope

Next evolution of micro-X-ray fluorescence spectroscopy with ultimate performance in speed and flexibility for elemental imaging.



LabRAM Soleil™

Confocal Raman Microscope

Including state-of-the-art technologies and functions, performs even the most advanced research.Ultrafast confocal Raman imaging has never been so easy.



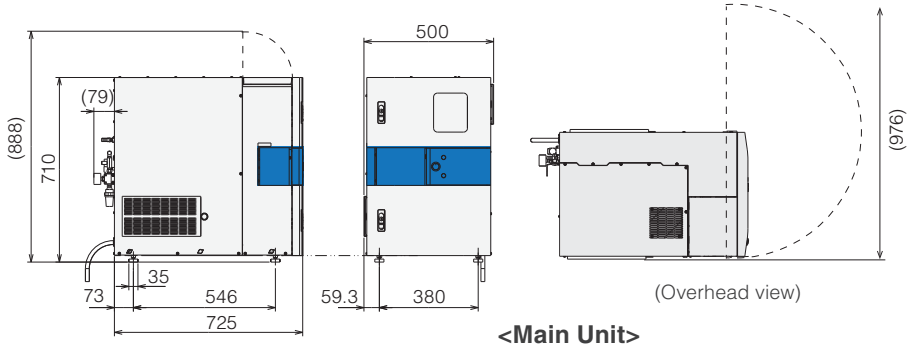
The EMIA Series Technical Specifications

Contents		EMIA-Pro	EMIA-Expert
Required sample amount		1.0 ± 0.10 g	
Standard cycle time		70 seconds/cycle	
Carbon	Meas. Range (m/m)	1.6 ppm - 6.0%	0.6 ppm - 10.0%
	Blank accuracy	$\sigma_{n-1} \leq 0.8$ ppm	$\sigma_{n-1} \leq 0.3$ ppm
Sulfur	Meas. Range (m/m)	2.0 ppm - 1.0%	0.6 ppm - 1.0%
	Blank accuracy	$\sigma_{n-1} \leq 1.0$ ppm	$\sigma_{n-1} \leq 0.3$ ppm
Sample meas. Accuracy	Carbon	$\sigma_{n-1} \leq 2.0$ ppm or RSD ≤ 1.0%	$\sigma_{n-1} \leq 0.3$ ppm (Sample less than 20 ppm), $\sigma_{n-1} \leq 1.0$ ppm or RSD ≤ 0.5% (Sample more than 20 ppm)
	Sulfur	$\sigma_{n-1} \leq 2.0$ ppm or RSD ≤ 1.5%	$\sigma_{n-1} \leq 0.3$ ppm (Sample less than 20 ppm), $\sigma_{n-1} \leq 1.0$ ppm or RSD ≤ 0.75% (Sample more than 20 ppm)
Utility	Carrier gas	Oxygen (Purity: 99.5%, Pressure: 0.30 - 0.33 MPa)	
	Operation gas	Nitrogen (Purity: 99.5%, Pressure: 0.35 - 0.38 MPa)	
	Power	200/220/240 V, 50/60 Hz, 5 kVA	
Dimensions and mass	Main unit*	500 x 725 x 710 mm [W x D x H], Approximately 134 kg	
	Purifier unit**	(Optional)	160 x 560 x 512 mm [W x D x H], Approximately 21 kg
Data processing and operation		USB data communication with PC Windows® 10, Touch panel (Optional) or keyboard and mouse operation	
Model name		EMIA-20P: Carbon/Sulfur EMIA-21P: Carbon EMIA-22P: Sulfur	EMIA-20E: Carbon/Sulfur EMIA-21E: Carbon EMIA-22E: Sulfur

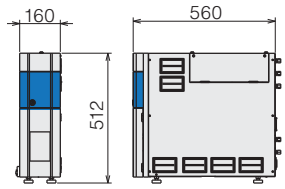
Note) "ppm" is equal to mg/kg.
* Except piping part and projection parts (D: 79 mm) on the back side. ** Optional for EMIA-Pro, Standard for EMIA-Expert
Windows is a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.

Dimensions

(Unit: mm)



<Main Unit>



<Carrier Gas Purifier>

IMS HORIBA Group is certified Quality Management System ISO9001, Environmental Management System ISO14001, and Occupational Health and Safety Management System ISO45001 and operate as Integrated Management System (IMS).

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Japan: +81 (75) 313-8121
China: +86 (21) -6289-6060
Korea: +82 (31) 296-7911
Singapore: +65- (6) -745-8300
India: +91- (11) -4646-5000
USA: +1 (732) 494-8660
France: +33- (1) 69-74-72-00
Germany: +49 (0) 6172-1396-500

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