

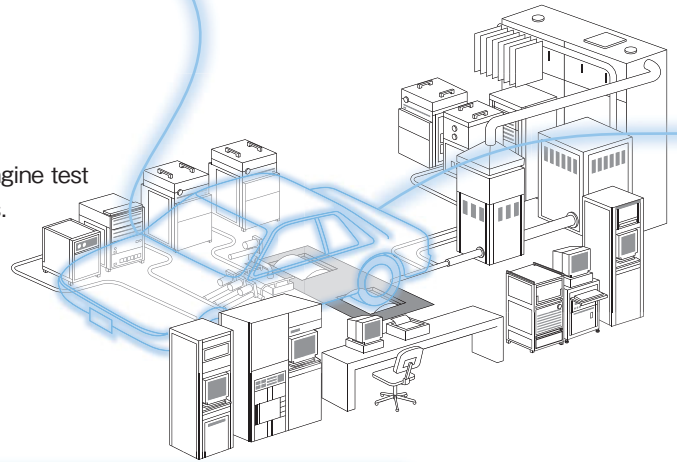


# HORIBA Capability for the Complete Emission Cell

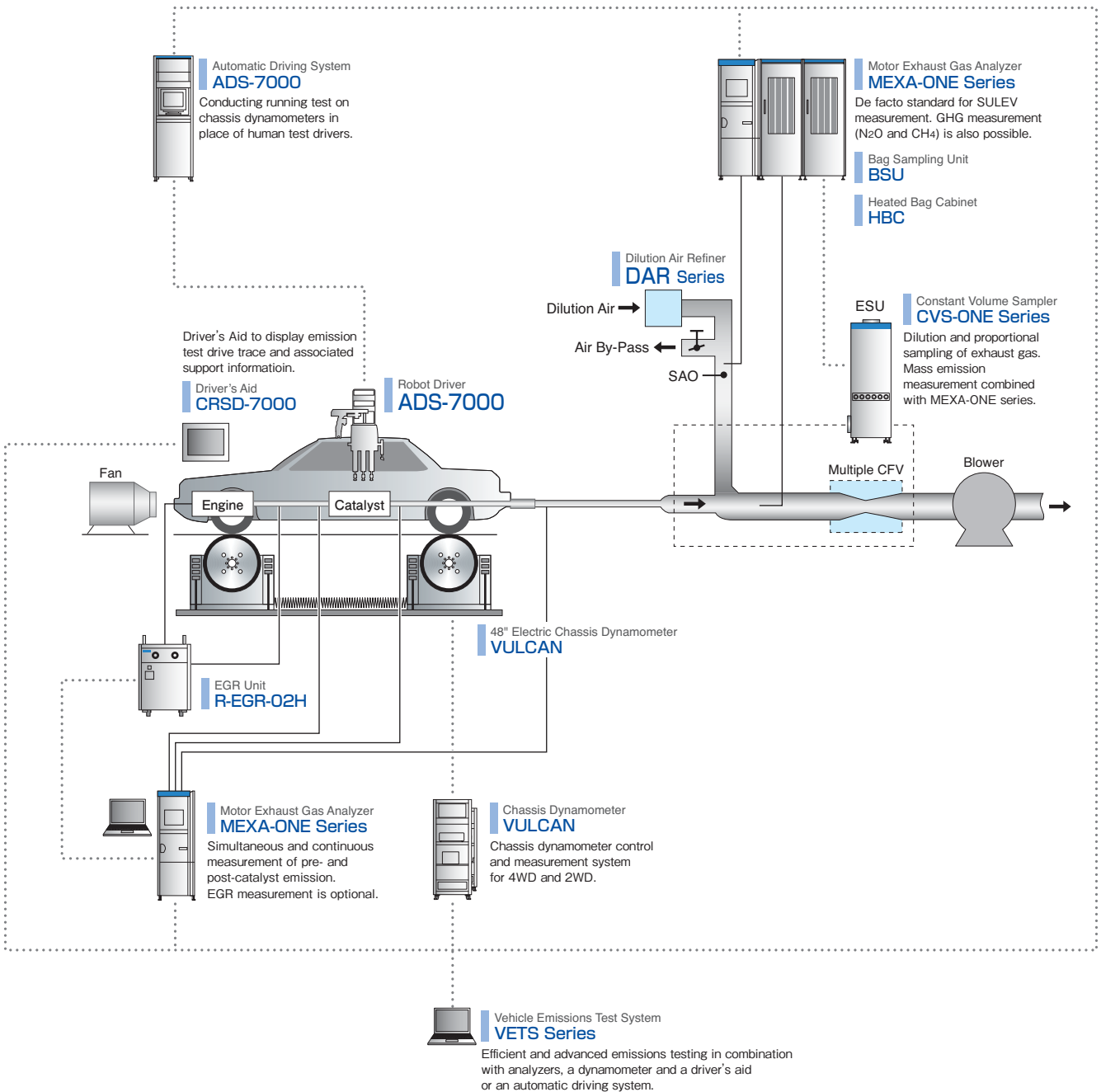
HORIBA's broad product line and in-depth support capabilities distinguish us as a single source for engine measurement applications.

Years of experience designing and implementing automated chassis and engine test cells allow us to offer comprehensive solutions for all customer applications.

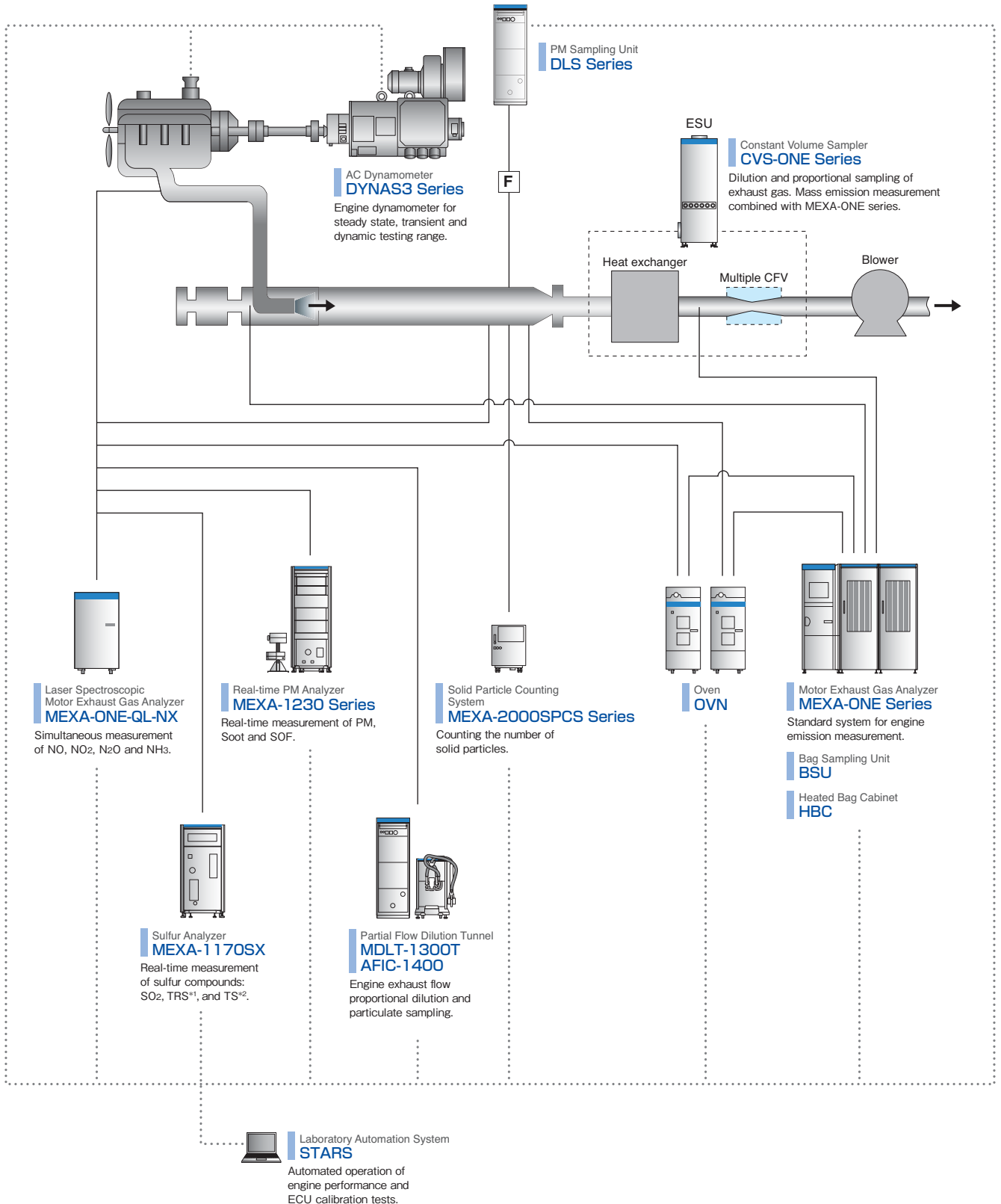
We have the resources, products and capabilities to address virtually any requirement -- up to and including turning an empty room into a fully-equipped and operational test cell.



## SULEV/ULEV Emission Measurement System

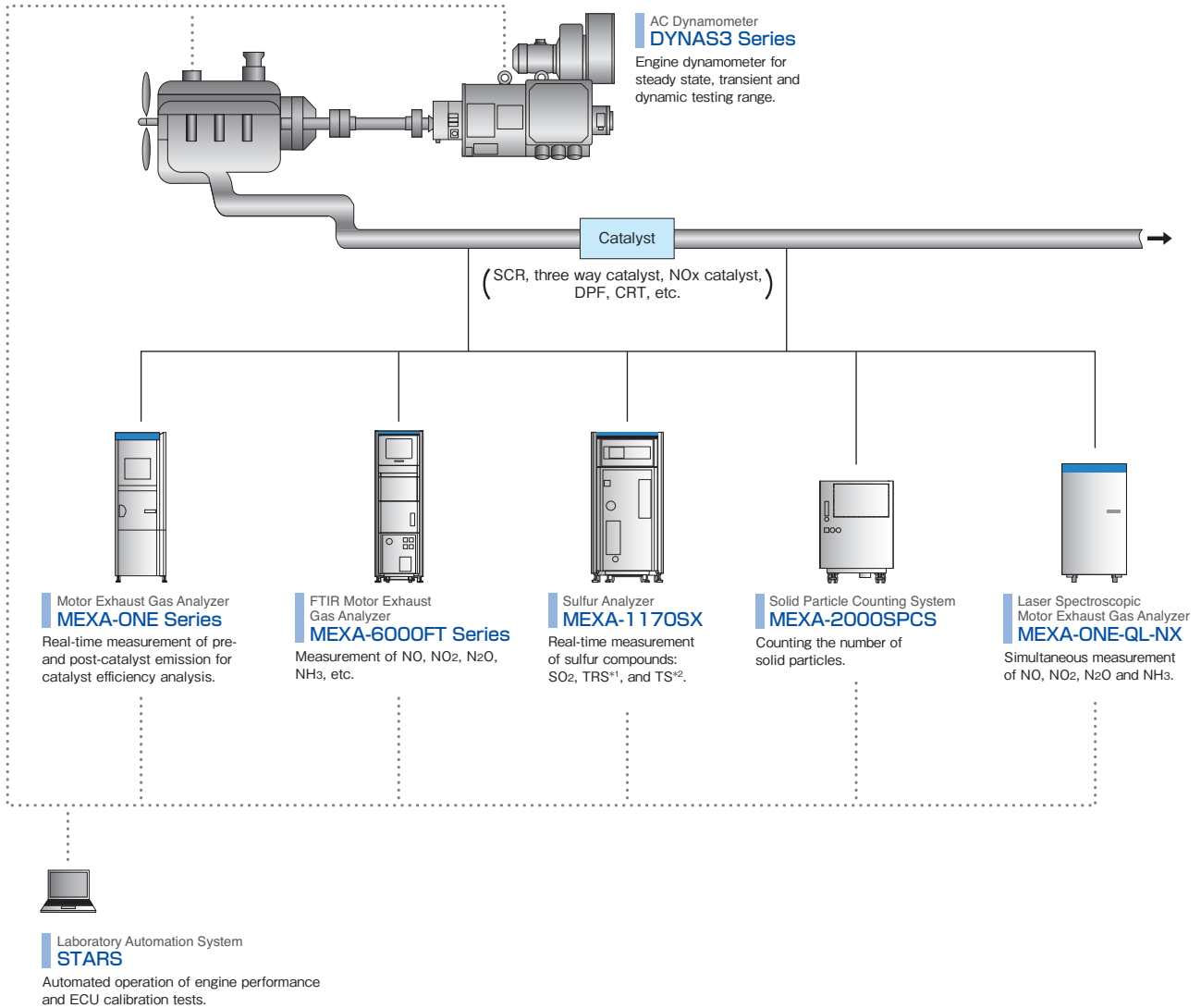


# Diesel Engine R&D Support System



\*1TRS: Total-Reduced Sulfur, \*2TS: Total-Sulfur

# Catalyst Efficiency R&D Support System



## ■ For Material Analysis



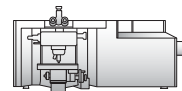
**X-ray Analytical Microscope XGT Series**  
Elemental analysis and structure analysis without any special pre-treatment.



**Laser Scattering Particle Size Distribution Analyzer LA Series**  
Measurement of the particle size distribution of catalyst and materials.

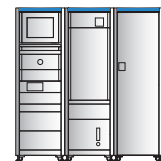


**Oxygen/nitrogen Analyzer EMGA Series**  
Accurate analysis of essential gas components (oxygen, nitrogen and hydrogen, etc.) for steel, new material and catalyst evaluation.



**Laser Raman Analyzer LabRAM HR Evolution**  
Suitable for the organic/inorganic analysis in micro field of materials.

## ■ For Catalyst Evaluation

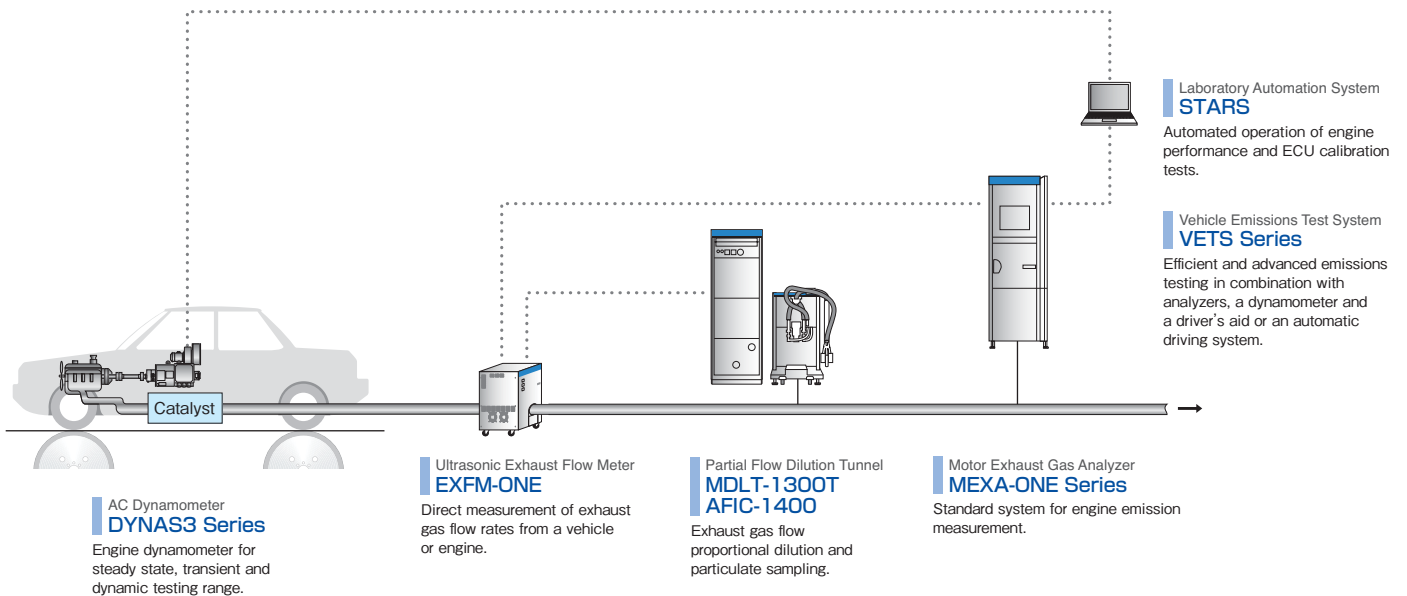


**Catalyst Test & Evaluation System SIGU Series**  
Generates simulated exhaust gas for testing catalysts without an engine. Typically used in combination with the Motor Exhaust Gas Analyzer for advanced catalyst testing.

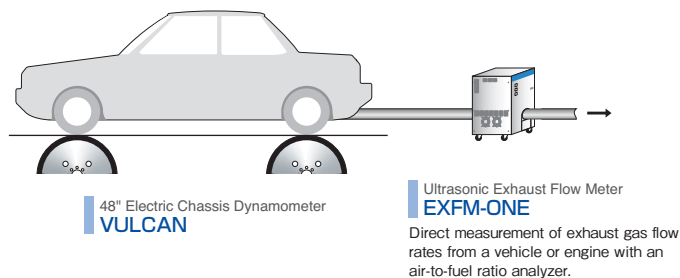
\*1TRS: Total-Reduced Sulfur, \*2TS: Total-Sulfur

## Real-time Mass Emission Measurement of Medium / Light-duty Engines

### PM Measurement of Medium / Light-duty Vehicles using MDLT

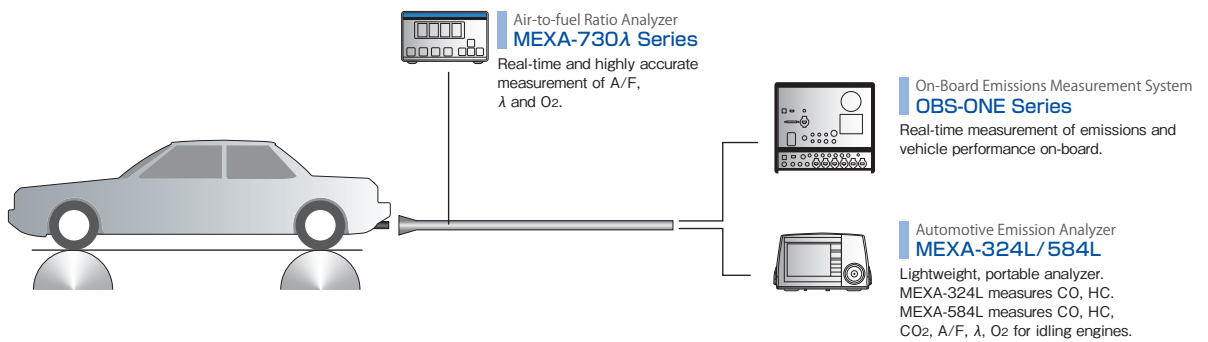


## Real-time Fuel Consumption Measurement of Vehicles

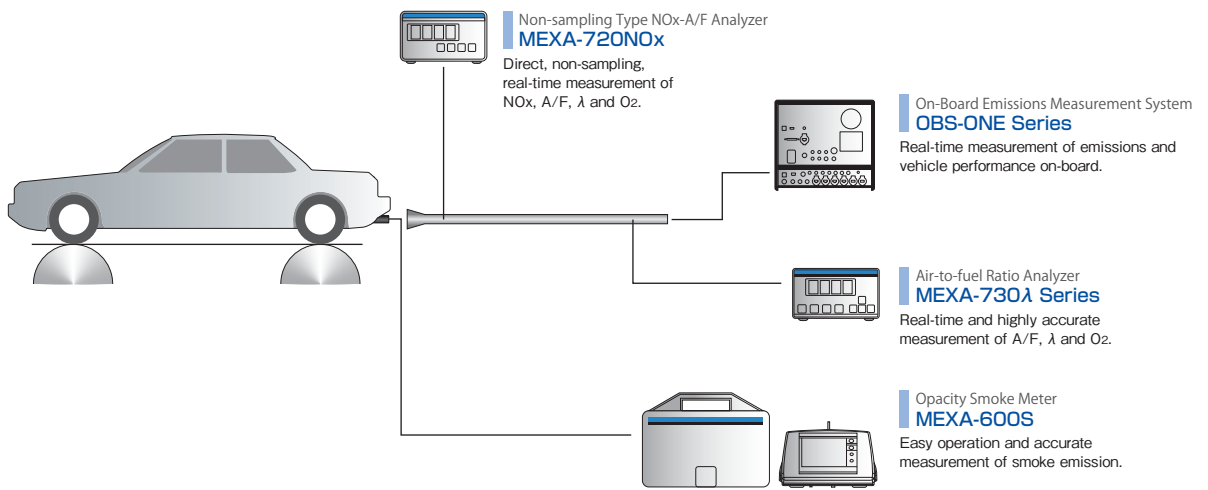


# Surveillance Program and Maintenance for In-Use Vehicles

## Gasoline Car



## Diesel Car



# Analyzers for Automotive, Marine and Aeronautical Applications

HORIBA develops and manufactures products and systems for testing all types of engines: heavy-duty to small utility, on-road to non-road, marine to locomotive, automotive to aeronautic.

Our broad product line includes analyzers, analytical systems, dilution/sampling systems, dynamometers, and automation systems to help engineers evaluate and improve: exhaust gas and particulate emissions, engine performance, fuel economy, fuel-cell reformer efficiency, other engine and vehicle parameters.

## Integrated Operating Platform



# HORIBA ONE PLATFORM



HORIBA ONE Series measurement devices employ the developed software platform HORIBA ONE PLATFORM. The platform integrates the test devices in an emission laboratory into a single user interface, increasing efficiency and optimizing user control over the entire testing process. The connection to non-HORIBA products is also possible.



### Motor Exhaust Gas Analyzer MEXA-ONE Series

MEXA-ONE incorporates HORIBA's leading-edge technology to enhance reliability and performance beyond today's expectations. It can be easily configured to provide optimum measurement capability based on the testing objective.



### Constant Volume Sampler CVS-ONE Series

CVS-ONE complies with the latest emission regulations (Euro 5/6, Euro VI, 40 CFR Part 1065, Post new long-term emissions regulations). The hardware was downsized from previous designs, reducing test cell footprint requirements. It introduces new functions and is more user-friendly, while still maintaining high accuracy. In conjunction with the MEXA-ONE, the system can be used to measure extremely low emission levels such as SULEV and Euro 6.



### Laser Spectroscopic Motor Exhaust Gas Analyzer MEXA-ONE-QL-NX

High accurate measurement system of four nitrogen compounds (NO, NO<sub>2</sub>, N<sub>2</sub>O and NH<sub>3</sub>) using QCL-IR method. It is suitable for R&D of NO<sub>x</sub> after-treatment systems such as urea-SCR, Lean NO<sub>x</sub> trap (LNT) and Continuously Regenerating Trap (CRT). In addition, it is an effective R&D tool also for US Greenhouse gas (GHG) and Euro VI regulations.



### Ultrasonic Exhaust Flow Meter EXFM-ONE

The device measures flow rate of exhaust gas from vehicle/engine directly. This can be used for various applications; for direct modal mass measurement connected with MEXA-ONE and for PM/emission measurement connected with MDLT series or BMD, for fuel consumption evaluation paired with MEXA-730λ (optional).



### On-Board Emissions Measurement System OBS-ONE Series

The latest Portable Emissions Measurement System (PEMS) designed for engine/vehicle certification under real road conditions. It measures concentrations of emissions (CO, CO<sub>2</sub>, THC, NO<sub>x</sub>, NO<sub>2</sub>), particulate matter, air-to-fuel ratio, exhaust flow rate, GPS data, environmental conditions and calculates mass emissions. It is suitable for broad emission test applications from certification to engine/vehicle R&D.



### Motor Exhaust Gas Analyzer MEXA-7000 Series

The MEXA-7000 system is designed for the continuous measurement of exhaust gas from all types of engine over a wide range of concentrations. A single MEXA-7000 system can measure CO, CO<sub>2</sub>, THC, CH<sub>4</sub>, NO/NO<sub>x</sub>/NO<sub>2</sub>, N<sub>2</sub>O, SO<sub>2</sub> and O<sub>2</sub>. Its flexible, modular design with separate analysis, sampling, power supply and solenoid sections allows you to create different system configurations to meet the wide diversity of applications and customer needs. We provide also a model with faster response (MEXA-7100FX).

### Motor Exhaust Gas Analyzer MEXA-1600D/DEGR

The MEXA-1600D is the result of a thorough review of global user requirements for standard direct exhaust measurement. While being able to continually measure, in real-time, the five exhaust gas components of CO, CO<sub>2</sub>, THC, NO<sub>x</sub>, and O<sub>2</sub>, this analyzer boasts HORIBA's high standard of performance in all aspects including measurement accuracy, response speed, and maintainability. Suitable for emission measurement of diesel and 4 cycle gasoline engines.

### Constant Volume Sampler CVS-7000 Series

CVS-7000 systems are used for measurement of mass emissions from all types of engine/vehicle in combination with the MEXA-7000 system. The CVS dilutes the exhaust gas with air and takes a proportional sample, stored in sample bags, for subsequent measurement by the MEXA-7000. CVS systems are available in a wide range of flow rates to suit the wide range of engine/vehicle types, test fuels and cycles.



### Bag Mini-Diluter BMD-1000

In conformity with the measurement methods specified by EPA and CARB, the Bag Mini-Diluter is an alternative to Constant Volume Sampling (CVS) techniques and provides the improvements necessary to address the testing of Partial Zero Emission Vehicle (PZEV), Super Ultra-Low Emission Vehicle (SULEV) and Ultra-Low Emission Vehicle (ULEV) emissions. Sample is diluted with high-purity zero air which eliminates problems with ambient bags having higher concentration than sample bags.

### FTIR Motor Exhaust Gas Analyzer MEXA-6000FT Series

The MEXA-6000FT is capable of continuously measuring multiple engine exhaust gas components using Fourier transform infrared spectroscopy. Transient phenomena can be analyzed in real time. In addition to the regulated automobile constituents, continuous measurement is also possible of such components as formaldehyde, N<sub>2</sub>O and NH<sub>3</sub>. The MEXA-6000FT is a powerful tool for the development of engines, exhaust treatment devices and fuels.

### NH<sub>3</sub>/NO<sub>x</sub> Analyzer MEXA-1170NX

It is the ideal tool for measuring NH<sub>3</sub> in the development of various NO<sub>x</sub> reduction technologies such as selective catalytic reduction (SCR), Lean NO<sub>x</sub> Traps (LNT) and three way catalysts. It measures NH<sub>3</sub> in real time with high sensitivity using twin chemiluminescence (CLD) detectors with an NH<sub>3</sub> oxidizing oven. In addition to standalone measurement of NH<sub>3</sub>, NO and NO<sub>x</sub>, it can be integrated as an additional analyzer with the MEXA-7000 Series.



### Sulfur Analyzer MEXA-1170SX

The MEXA-1170SX is a continuous gas analyzer for sulfur compounds existing in engine emissions. It can measure concentrations of SO<sub>2</sub> and total reduced sulfur compounds (TRS), such as H<sub>2</sub>S, separately. It can also measure the total sulfur compounds (TS) that contains both gaseous compounds and liquid compounds in PM, such as SO<sub>3</sub>. "Lubricant oil consumption" measurement using sulfur trace method is also available.

### Laser Spectroscopic Motor Exhaust Gas Analyzer MEXA-1400QL-NX

This engine exhaust gas analyzer measures simultaneously four nitrogen compounds (NO, NO<sub>2</sub>, N<sub>2</sub>O, NH<sub>3</sub>), using Quantum Cascade Laser Mid-infrared Spectroscopy. Suitable for direct (un-diluted) measurement of nitrogen components, which are important for evaluating NO<sub>x</sub> after-treatment devices. Complied with the GHG standard and EuroVI requirements.

### Laser Spectroscopic Motor Exhaust Gas Analyzer MEXA-1100QL-N2O

This is for dilute bag and dilute modal analysis of N<sub>2</sub>O in exhaust. Using Quantum Cascade Laser Mid-infrared Spectroscopy, the analyzer provides highly sensitive measurement of N<sub>2</sub>O, even at very low concentrations, with minimal interference from the other compounds. It is a certification tool for new regulation such as EPA GHG. The units were delivered to EPA facility.





### Super-Low-Mass PM Analyzer MEXA-1370PM

The MEXA-1370PM measures in just four minutes the ultra-micro particulate matter collected by a filter (Soot 0.2 µg, SOF 0.2 µg, sulfate 8.0 µg). In addition to total PM mass, this analyzer can measure Soot, SOF and sulfate separately. When it comes to PM analysis, this analyzer simplifies the procedure and increases work efficiency.



### Real-Time PM Analyzer MEXA-1230PM

The MEXA-1230PM continuously measures the Particulate Matter (PM) in engine emissions, as Soot, soluble organic fraction (SOF) and total PM with high sensitivity by independent methods. It can easily analyze the transitional changes in particulate concentration. The ability to measure tunnel-diluted sample gas or direct sample gas in real time makes the MEXA-1230PM perfect for speeding up engine development and for experiments geared toward engine improvement.



### Real-time Soot Analyzer MEXA-1230Soot

The analyzer provides a real-time measurement of Soot concentration in the exhaust to assist with the clean vehicle development programs. A highly sensitive detector based on the Diffusion Charging principle provides a wide range in conjunction with a stable heated dilution system for engine combustion analysis, ECU calibration and after-treatment development. The compact size improves the flexibility in a wide range of applications and test cell layouts.



### Solid Particle Counting System MEXA-1000SPCS

MEXA-1000SPCS measures solid particles in engine exhaust gas with the Condensation Particle Counting (CPC) method. Measurement of particle number over a wide-range has been achieved in combination with the Wide Range Continuous Diluter (WRCD). It is able to take raw sample from engine tailpipe, as well as diluted sample from tunnel-CVS. Applicable to after-treatment system evaluation, by taking sample gas from upstream and downstream of after-treatment system.



### Solid Particle Counting System MEXA-2000SPCS Series

MEXA-2000SPCS series measures the number of solid particles from engine exhaust gas in real-time. The series can complete engine/vehicle certification testing in the latest regulations (Euro 5/6 and Euro VI), which requires complied dilution systems, along with R&D testing of engines and particulate filters by direct sampling without dilution. The compact design provides small footprint and enables an easy installation and transport in a laboratory.



### Partial Flow Dilution Tunnel MDLT-1300T Series

The MDLT-1300T is an exhaust gas partial flow dilution system for collecting Particulate Matter (PM) samples from engines. Compact and offering fast dynamic dilution control capability, it can replace the full flow dilution tunnel for some legislation. Applications range from transient testing of heavy duty diesel engines to general purpose steady state testing of both large and small engines.



### AC Dynamometer DYNAS3 Series

DYNAS3 is suited for use in engine test stands. The AC machine, variable frequency drive with test stand controller and safety module are tuned to one another to form an assembly. It can be used in any type of development and function test stand. The applications range from simple test stands for steady state operation up to sophisticated test stands for dynamic test cycles. Legislative test cycles such as the MVEG Test or FTP 75 can be simulated. Additionally, with SPARC RLS a road load simulation including driver and vehicle simulation is possible.



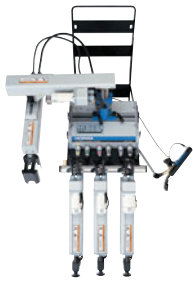
### 48-inch Electric Chassis Dynamometers VULCAN

For use in measuring the dynamic characteristics of vehicle engines, engine peripherals and exhaust after-treatment, these chassis dynamometers are designed to accurately reproduce the exact driving conditions that would be experienced on a road. These single roll dynamometers feature large 48-inch diameter rollers for minimal tire friction, an automatic wheel base adjustment function and easy vehicle centering and load settings. The system is both for 4WD vehicles and 2WD vehicles.



### Driver's Aid CRSD-7000

The CRSD-7000 Driver's Aid graphically relays instructions and information during emissions testing to the driver such as target speed, actual speed and shift timing. The driver is able to operate the vehicle while visually confirming all the required information. A replay function is provided so you can compare and review the deviation between the programmed and actual driving sequence on the LCD.



## Automatic Driving System

ADS-7000

Designed to operate a vehicle on a chassis dynamometer or engine powertrain test cells, the ADS-7000 replaces a human driver for emission and endurance type testing. Its precise control of the accelerator, brake, clutch and gearshift makes it ideal for vehicle calibration and emissions "fine tuning" as well as the more usual applications of mileage accumulation and environmental test chambers.



## Vehicle Emissions Test System

VETS-7000NT

This vehicle emissions test automation system offers total control of all the analysis equipment and peripherals used in automobile vehicle emissions testing. Simple user operation boosts testing efficiency. Standard software modules provide optimum flexibility for creating and modifying real-time graphic displays, report layout and calculations. Multiple test cells can be networked via LAN for comprehensive data management.



## Laboratory Automation System

STARS

STARS supports a wide range of application areas such as testing for engine, powertrain and transmission, vehicle, and brake and clutch, and data management as well as ECU testing. It contributes to the efficiency and the speedup of the R&D process.



## SHED for automotive components

SHED Series

This mini-SHED (Sealed Housing for Evaporative Determination) is used for the measurement of HC and CH<sub>3</sub>OH mass in the evaporative emission from automotive components. Designed to minimize the HC evaporative effect, it supports low-concentration measurement. With variable volume control and temperature control with programmed sequence, DBL test for EPA as well as CARB can be performed. (For Asian market only)



## Fuel Flow Measurement System

FQ-2000 Series

An important tool for the development of internal combustion engines, measuring fuel mass flow rate continuously with high precision. It can be applied to diesel, gasoline and alcohol-based fuels up to 100% in any engine and vehicle test stand for R&D, quality management and production. A control unit with an operator touch panel directly integrated into the system gives a quick and easy system overview and reports the current measurement data and parameter settings.



## On-Board Emissions Measurement System

OBS-2200 Series

The OBS-2200 Series is a compact test system for on-road emissions and vehicle performance measurement. The system continuously measures, not only the concentration of CO, CO<sub>2</sub>, THC and NO<sub>x</sub>, emitted from moving vehicles, but also AFR and exhaust flow rate, to calculate mass emissions and fuel consumption. The OBS features include a GPS receiver and other sensors to monitor engine parameters and atmospheric conditions in real time. Euro VI Compliance.



## Automotive Emissions Analyzer

MEXA-324L

With a simple press of the "MEAS" key, this analyzer simultaneously measures CO and HC for use in checking gasoline engine performance, inspections and maintenance. It features a large-character LCD and bright orange LEDs that are highly visible even outdoors, and a simple, easy-to-use interface. Digital I/O terminals come standard so that measurement data can be easily stored and processed. This analyzer is truly designed for ease of use. (For Asian market only)



## Automotive Emissions Analyzer

MEXA-584L

Designed for engine tuning and inspection, this analyzer measures the CO, HC, CO<sub>2</sub>, A/F, λ and O<sub>2</sub> in automobile exhaust gas. Measurements are taken by simply inserting the probe into the exhaust pipe. With a large liquid crystal digital display, automatic zero calibration, easy-to-read symbol marks and an interactive interface, the MEXA-584L is extremely simple to operate.



## Automobile Exhaust Gas Analyzer

MEXA-324JHS

This automobile exhaust gas analyzer is designed for quick, accurate and easy-to-use vehicle inspections and maintenance in official vehicle inspections and vehicle service garages. Using simple operation, six different vehicle types can be selected for the continuous analysis of CO, HC, and CO<sub>2</sub>. The MEXA-324JHS fully complies with the new inspection standard, OIML R99.



### Opacity Smoke-meter MEXA-600S

It measures smoke in the exhaust gas emitted from diesel engines by the opacity method. Low-concentration smoke can be measured with more precise repeatability and accuracy, comparing it with conventional smoke-meters of light reflection type. It is most suitable for auto repairs, inspection and safety checks, and R&D purposes, such as DPF evaluation.



### Non-sampling Type NO<sub>x</sub>-A/F Analyzer MEXA-720NO<sub>x</sub>

With no additional sampling devices, it measures NO<sub>x</sub> concentration, air fuel ratio (A/F), excess air ratio ( $\lambda$ ) and oxygen (O<sub>2</sub>) concentration in the exhaust gas emitted from automotive and marine engines with high accuracy and provides quick response without sampling delays.



### Air-to-Fuel Ratio Analyzer MEXA-730 $\lambda$ Series

To meet the stringent measurement conditions of research and development, the on-board auto sensor is produced specifically for air-to-fuel evaluation. Each unit undergoes thorough inspection to guarantee accuracy. Truly compact, it can be mounted on the dashboard of a vehicle, on a table-top, or in a 19-inch rack cabinet. Multi-channel measurements are easily accommodated by using several analyzer units simultaneously.



### Heated Type THC Analyzer MEXA-1170HFID

Starting with automobile engines, the heated-type, standalone MEXA-1170HFID can be used to measure the THC in the exhaust gas of all engine categories and SHED including general-purpose, methanol, LPG and CNG engines.



### Motor Exhaust Gas Analyzer MEXA-1170HCLD Series

The MEXA-1170HCLD Series accomplishes this by condensing high-level functions into a compact body for real-time measurement of NO and NO<sub>x</sub> emitted from gasoline, diesel, and LPG engines. Use it as a single component analyzer or as a MEXA-7000 add-on.



### Exhaust Gas Analyzer MEXA-1300M

With easy operation, the MEXA-1300M lets you quickly and accurately analyze CO, CO<sub>2</sub>, HC and O<sub>2</sub> (optional), as well as calculate the AFR and lambda of emissions from two-cycle and four-cycle engines. Complete with a built-in pre-sampling unit for oil removal and various functions controlled by single-key operation, this powerful analyzer excels at continuous exhaust gas analysis of 4 and even 2 cycle vehicle engines on assembly lines and the tuning of engines on engine benches.



### Marine Engine Exhaust Gas Analyzer MEXA-1600DS

The MEXA-1600DS measures the CO, CO<sub>2</sub>, O<sub>2</sub> and NO<sub>x</sub> from marine engine exhaust gas with high accuracy. The measurement method complies with the NO<sub>x</sub> technical code of the IMO (International Maritime Organization) as well as ISO-8178. Having the analyzer split onto two dedicated carts makes it easy to transport and move around for analysis needs in various locations. For IMO appraisal needs, we can recommend the 5-component MEXA-1600DS to measure NO<sub>x</sub>, CO<sub>2</sub>, CO, O<sub>2</sub> and THC.



### Fuel Cell System Gas Analyzer MEXA-7000FC

The MEXA-7000FC continuously measures, in real time, the CO, CO<sub>2</sub>, CH<sub>3</sub>OH and NO<sub>x</sub> produced during fuel cell methanol reformation. The CO and CO<sub>3</sub>OH that coexists in high hydrogen concentrations can be accurately measured and, by adding an optional analyzer module, H<sub>2</sub>O can also be measured. This analyzer is perfect for the development of the complete automotive fuel cell system.



### Catalyst Test and Evaluation System SIGU Series

The SIGU Series generates simulated exhaust gases over a wide range of concentrations and is ideal for the general purpose testing and development of exhaust after-treatment devices such as three-way catalysts. The SIGU Series can be combined with other instruments, such as MEXA-7000 and test automation systems, to provide a total solution for the development of exhaust treatment devices.

# World-Wide Sales & Service Network

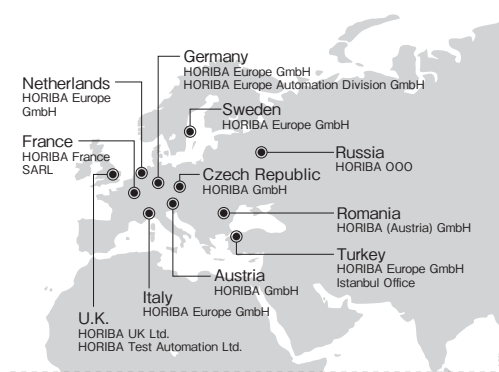
HORIBA representatives are always ready to provide assistance with specifications and applications. They are also available to assist in laboratory operation by providing technical information, additional training courses, servicing and maintenance support. Contractual preventative maintenance programs are available upon request. Contact your nearest HORIBA office or authorized representative for details.

As a dedicated manufacturer of advanced analyzer technology, HORIBA will continue making technical innovations in this new century, doing its very best to contribute to the progress in the field of emissions testing by providing analytical excellence.



## The Americas

## Europe



## Asia



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

- The specifications, appearance or other aspects of products in this catalog are subject to change without notice.
- Please contact us with enquiries concerning further details on the products in this catalog.
- The color of the actual products may differ from the color pictured in this catalog due to printing limitations.
- It is strictly forbidden to copy the content of this catalog in part or in full.
- The screen displays shown on products in this catalog have been inserted into the photographs through compositing.
- All brand names, product names and service names in this catalog are trademarks or registered trademarks of their respective companies.

<http://www.horiba.com> e-mail: [info@horiba.co.jp](mailto:info@horiba.co.jp)

● **HORIBA, Ltd. Head Office**  
2 Miyano Higashi, Kisshoin Minami-ku, Kyoto Japan  
Phone: 81 (75) 313-8121  
Fax: 81 (75) 321-5725

● **HORIBA (China) Trading Co., Ltd., Beijing Office**  
Unit D, 1F, Building A, Synnex International Park, 1068 West Tianshan Road, Shanghai, 200335 China  
Phone: 86 (21) 6289-6060  
Fax: 86 (21) 6289-5553

● **HORIBA Instruments (Singapore) Pte Ltd.**  
10, Ubi Crescent #05-12 Lobby B Ubi Techpark Singapore 408564  
Phone: 65 (6) 745-8300  
Fax: 65 (6) 745-8155

● **PT HORIBA Indonesia**  
Jl. Jalur Sutera Blok 20A, No.16-17, Kel. Kunciran, Kec. Pinang Tangerang - 15144, Indonesia  
Phone: 62 (21) 3044-8525  
Fax: 62 (21) 3044-8521

● **HORIBA India Private Limited Pune Office**  
246, Okhla Industrial Estate, Phase 3 New Delhi - 110020, India  
Phone: 91 (11) 4646-5000  
Fax: 91 (11) 4646-5020

● **HORIBA Korea Ltd.**  
10, Dogok-ro, 6-Gil, Gangnam-Gu, Seoul, 135-860, Korea  
Phone: 82 (2) 753-7911  
Fax: 82 (2) 756-4972

● **HORIBA Instruments Incorporated Irvine Office**  
9755 Research Drive, Irvine, CA 92618, U.S.A.  
Phone: 1 (949) 250-4811  
Fax: 1 (949) 250-0924

● **Ann Arbor Facility**  
5900 Hines Drive, Ann Arbor, MI 48108 U.S.A.  
Phone: 1 (734) 213-6555  
Fax: 1 (734) 213-6525

● **Troy Facility**  
2890 John R. Road, Troy, MI 48083 U.S.A.  
Phone: 1 (248) 689-9000  
Fax: 1 (248) 689-8578

● **HORIBA Canada, Inc.**  
Unit 102, 5555 North Service Road, Burlington, Ontario L7L 5H7, Canada  
Phone: 1 (905) 335-0234  
Fax: 1 (905) 331-2362

● **TCA/HORIBA Sistema de Testes Automotivos Ltda.**  
Rua Goias 191 Vila Oriental, Diadema, São Paulo, Brasil CEP 09941-690  
Phone: 55 (11) 4224-0200  
Fax: 55 (11) 4227-3133

● **HORIBA Europe Automation Division GmbH**  
Zabergaeu-Str. 3, D-73765 Neuhausen, Germany  
Phone: (49) 7158-933-300  
Fax: (49) 7158-933-399

● **HORIBA Europe GmbH Head Office**  
Hans-Mess-Str.6, D-61440 Oberursel, Germany  
Phone: 49 (6172) 1396-0  
Fax: 49 (6172) 1373-85

● **Darmstadt Office**  
Landwehrstrasse 55, D-64293 Darmstadt, Germany  
Phone: 49 (6151) 5000-0  
Fax: 49 (6151) 5000-3865

● **HORIBA Sweden**  
Sydhamsnvagen 55-57, SE-15138, Sodertalje, Sweden  
Phone: 46 (8) 550-80701  
Fax: 46 (8) 550-80567

● **HORIBA Benelux**  
Science Park Eindhoven 5080 (Industrial park "Ekersrijt") 5692 EA, Son, Netherlands  
Phone: 31 (40) 2900-240  
Fax: 31 (40) 2900-624

● **Torino Office**  
Strada Torino 43/45, 10043 Orbassano, Torino, Italy  
Phone: 39 (11) 904-0601  
Fax: 39 (11) 904-0448

● **Istanbul Office**  
Küçükbakkalköy Mah. Kayisdagi Cad., Flora Residence No:3/2504, 34750 Ataşehir/Istanbul  
Phone: 90 (216) 572-1166  
Fax: 90 (216) 572-1167

● **Olomouc Factory**  
Železnici 512/7, 772 00 Olomouc, Czech Republic  
Phone: (420) 588-118-365  
Fax: (420) 585-310-725

● **HORIBA France Sarl**  
12, Av des Tropiques Hightec Sud, F-91955 Les Ulis, France  
Phone: 33 (1) 69-29-96-23  
Fax: 33 (1) 69-29-95-77

● **HORIBA UK Limited Northampton Office**  
Kyoto Close, Whittington Park, Northampton NN3 6FL, UK  
Phone: 44 (1604) 542-500  
Fax: 44 (1604) 542-699

● **HORIBA Test Automation Limited**  
Evesham House, Whittington Hall, Whittington Road Worcester, WR5 2ZX, UK  
Phone: 44 (1905) 359359  
Fax: 44 (1905) 359332

● **HORIBA (Austria) GmbH Head Office**  
Kaplanstrasse 5, A-3430 Tulln, Austria  
Phone: 43 (2272) 65225  
Fax: 43 (2272) 65230

● **Tulin Sucursala Pitesti**  
B-dul REPUBLICII, Nr. 38, Bloc 2 IRTA, Scara A, Etaj 3, Ap. 11, PITESTI, 110011, Judetul Arges ROMANIA  
Phone: 40 (348) 807117  
Fax: 40 (348) 807118

● **HORIBA OOO Head Office**  
Altufievskoe shosse, 13, building 5, 127106, Moscow, Russia  
Phone: 7 (495) 221-87-71  
Fax: 7 (495) 221-87-68

Bulletin:HRE-0037H

Printed in Japan TS-N(SK)33