

HORIBA
Automotive Test Systems

CONSTANT VOLUME SAMPLER
CVS-ONE



HORIBA
ONE
PLATFORM

CVS-ONE SERIES

Smart and Compact

The CVS-ONE series is designed for the measurement of diluted emissions from vehicles and engines. The new integrated operating platform, HORIBA ONE PLATFORM is adopted for the CVS-ONE. The hardware has been significantly 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 (Motor Exhaust Gas Analyzer), the system can be used to measure extremely low emission levels such as SULEV. The new CVS reliably supports emission testing requirements of today and into the future.

Integrated Operating Platform HORIBA ONE PLATFORM

The newly developed software is an integrated operating platform for MEXA-ONE, CVS-ONE and other devices. The intuitive, ergonomic design of the new software platform makes system operation easier. System control and a complete system view of other measurement devices are available from one single display. User support for system operation such as maintenance, alarm and message functions have been further enhanced.

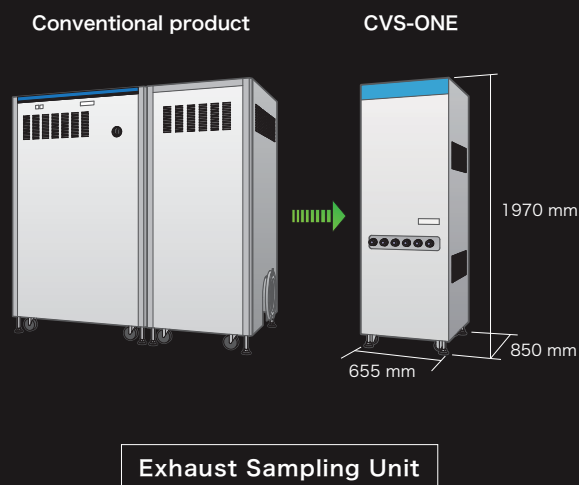


Measurement
(MEXA-ONE & CVS-ONE)

System View
(Condition check for other devices)

A Compact Design for Flexible Layout

65% less volume, 70% less footprint.**



** By comparison with HORIBA's conventional products, depending on system specifications such as ESU / Heat Exchanger



One System for All Applications

CVS-ONE offers a wide range of dilution flow rate options and separate main sample line functionality. One system covers testing for a wide variety of applications, such as diverse engine/vehicle testing, vehicle testing, and various fuel types (gasoline, diesel and alternative fuel).

Certification Test

- **Complies with the latest emission regulations**

EU: Euro 5/6, Euro VI US: 40 CFR Part 1065 Japan: Post new long-term emissions regulations
Support of future regulations as they become defined (CFR 1066, WLTP gtr, etc.)

- **Flexible number of bags and combinations for various types of testing cycles**

Additional bags can be added after installation (Max.20 bags)

Highly Accurate Fuel Consumption Measurement

- **Suitable for Hybrid Vehicle/Plug-in Hybrid Vehicle fuel consumption tests**

Max. 5 Bag pairs; suitable for HV/Plug-in HV continuous testing
Bag sampling is related to operating conditions of engine

- **Control measurement accuracy by history menu of system quality checks, system performance, and auto propane check (optional)**

Low Emission Measurement for LEV III level (California, US)

- **Reduced influence of contamination from sampling gas**

Bag sampling unit and analyzers share the same enclosure (shorter gas line).
Enhanced line purge functions
Automatic system blank test (Null test) and history management function

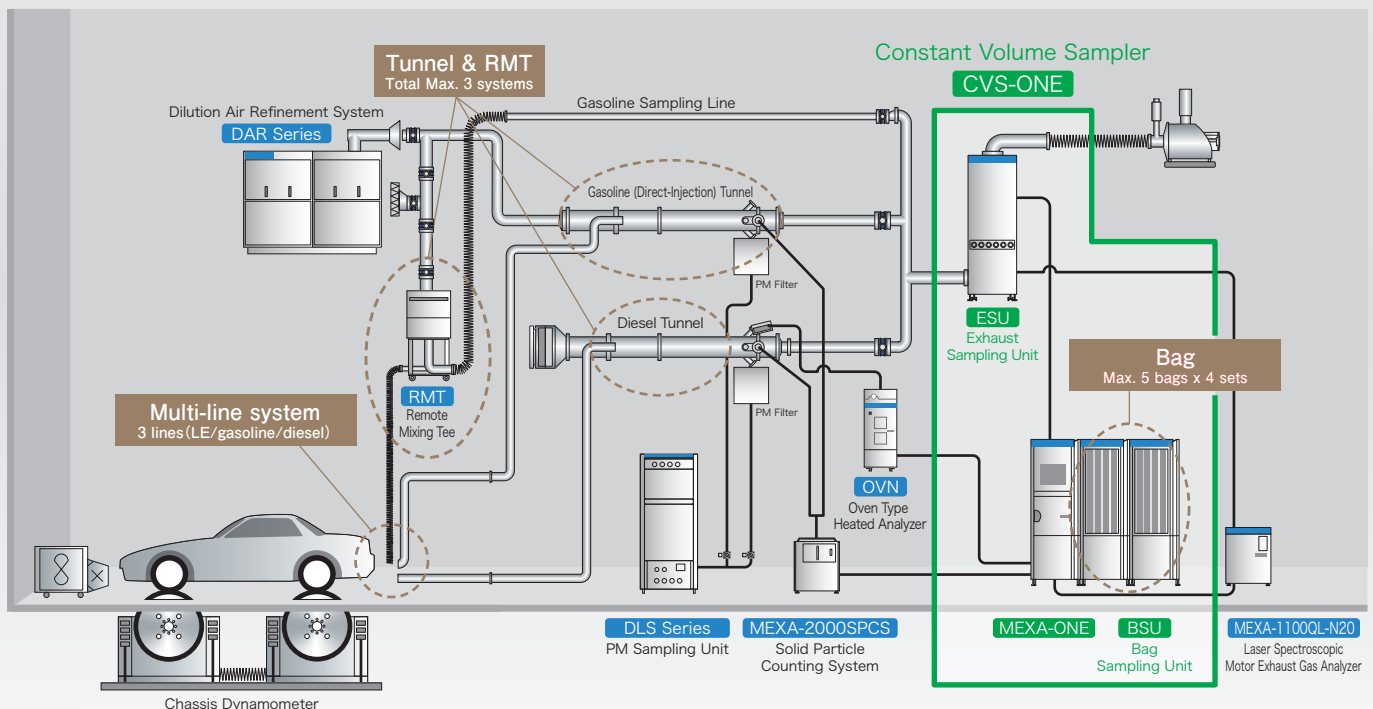
- **Interference influence reduction**

Low concentration CO₂ analyzer minimizes water interference

- **Select suitable dilution factor**

Easy to select suitable dilution factor with water monitor function (optional)

◎ Dilution System <LDV Gasoline / Diesel>



System Specifications

Models		CVS-ONE-SV	CVS-ONE-SV-HE	CVS-ONE-MV	CVS-ONE-MV-HE
Flow control		Critical Flow Venturi (CFV)			
Flow rate changing		Manual (Single-Venturi System)		Automatic (Multi-Venturi System)	
Maximum flow rate ^{※1}		20 m ³ /min	20 m ³ /min	30 m ³ /min	30 m ³ /min 40 m ³ /min
Heat Exchanger		-	●	-	● ●
Integrated Mixing Tee		●	-	-	-
Dimensions Mass	Exhaust Sampling Unit (ESU)	655(W) × 855(D) × 1970(H) mm			1310(W) × 855(D) × 1970(H) mm
	Bag Sampling Unit (BSU)	Approx. 350 kg		Approx. 400 kg ^{※2}	Approx. 500 kg Approx. 800 kg
Environmental conditions	Temperature	5 to 40 deg.C			
	Humidity	80% or less as relative humidity			
	Atmospheric pressure and altitude	80 to 105 kPa (Up to 2000 m above sea-level) ^{※3}			

※1 Please contact HORIBA regarding optional specifications, such as a larger flow rate for heavy duty engines.

※2 For systems without Mixing Tee.

※3 System available under low pressure condition (80 to 93 kPa, 700 to 2000 m above sea level) should be specified when ordering as an optional specification.

OPTION

Heated Bag Cabinet (HBC), Flow Calibration Unit (SAO), Propane Check Unit (CFO-202)



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

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