

Compact and Easy NO and NOx Analysis

Build upon existing facilities. Measure NOx anywhere. These are HORIBA's answers to needs in the real world of engine exhaust gas analysis. The MEXA-1170HCLD Series accomplishes this by condensing high-level functions into a compact body for real-time measurement of NO and NOx emitted from gasoline, diesel, and LPG engines. Use it as a single component analyzer or as a MEXA-7000 add-on.

NO NOx

Highly sensitive, real-time NO and NOx analysis using chemiluminescence (CLD)

Heating-type chemiluminescence (CLD) is used to perform highly sensitive measurement of NO and NOx in real time. Sensitivity for NO is extremely high and NOx measurement is possible with minimal interference from other components. Both atmospheric and vacuum configurations are available.

Atmospheric type MEXA-1170HCLDA

The sample is heated until it reaches the NOx converter. After NOx is reduced to NO, it is dehumidified and measured.



Vacuum type MEXA-1170HCLDV

All lines heat the sample and the sample is measured without dehumidification.



Compact and reliable

A compact design has been realized by building the pump into the main unit, so analysis is convenient and doesn't waste space. Well-known MEXA reliability is built into all aspects. Take the detection section. It uses components equaling those of the MEXA-7000 Series.



Batch operation from the MEXA-7000

Not only can the MEXA-1170HCLD be used for single-component NO and NOx analysis, it can also be used as a MEXA-7000 Series add-on capable of operation from the control unit (MCU). For host communications you can choose between a LAN or serial (RS-232C) connection.



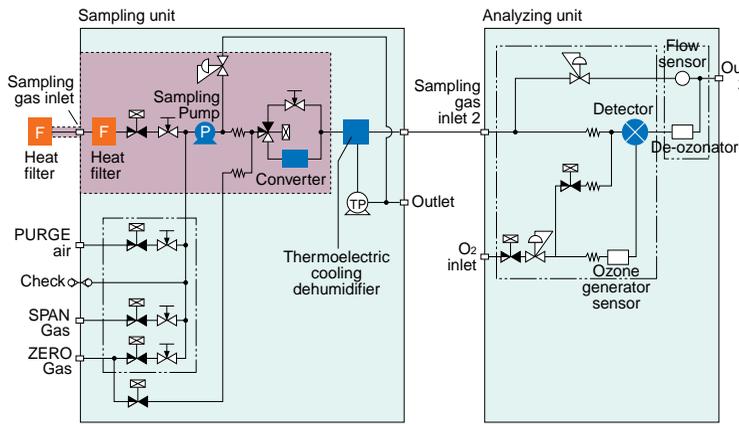
for NO and NOx analysis

Motor Exhaust Gas Analyzer MEXA-1170HCLD Series

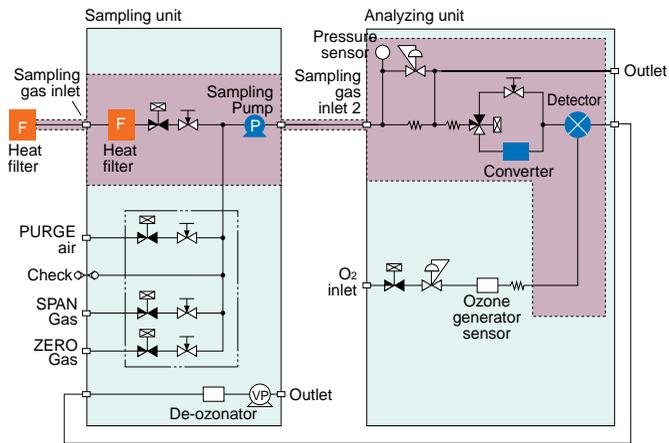
*The MEXA-1170 Series can be upgraded to a multi-component analyzer by combining single component analyzers.



MEXA-1170HCLDA (Atmospheric type)



MEXA-1170HCLDV (Vacuum type)



MEXA-1170HCLD Series Specifications

- Model:**
 MEXA-1170HCLDA (Atmosphere type)
 MEXA-1170HCLDV (Vacuum type)
- Application:**
 Exhaust gases from gasoline, diesel and LPG engines
- Target components:** NO, NOx
- Principle:** Chemi-luminescence detection (heated)
- Measuring ranges:**
 NO/NOx: 0-10/20/50/100/500/1000/2000/5000/10000 ppm
 (9 ranges)
- Outputs/Inputs:**
 Monitoring on LCD panel
 Analog output: 0-1 V/0-10 V
 (to be specified when ordering)
 Digital input-output: RS-232C or LAN (by AK protocol)
 Communication with HORIBA MEXA-7000 series
 (optional): can be connected to main control unit (MCU)
- Communication with MEXA-7000 series *1:**
 Following functions on MEXA-7000MCU are available:
 - Display of concentration
 - Range selection
 - Status switching between Stand-by and Pause
 - Control of gas sampling (ZERO/SPAN/CAL/MEAS/PURGE/RESET)
 - Calendar time function (Stand-by and Pause only)
 - Analog output (optional function of MEXA-7000)
 - Trend chart (optional function of MEXA-7000)
 - Post trend chart (optional function of MEXA-7000)

- Sample gas flow rate:**
 MEXA-1170HCLDA (Ambient type) 3.0 ±0.5 L/min
 MEXA-1170HCLDV (Vacuum type) 2.0 ±0.5 L/min
- Sample gas pressure:** Between -5 kPa to 30 kPa
- Response time of calibration line (T5-90) *2:**
 From ZERO/SPAN inlet,
 MEXA-1170HCLDA: within 2.5 s (at flow rate of 2.0 L/min)
 MEXA-1170HCLDV: within 1.5 s (at flow rate of 3.0 L/min)
- Response time of sample line (T5-90) *2:**
 From inlet of sample probe (6 m),
 MEXA-1170HCLDA: within 3.5 s (at flow rate of 2.0 L/min)
 MEXA-1170HCLDV: within 2.5 s (at flow rate of 3.0 L/min)
- Noise:**
 Less than 2.0 % of full scale
 (As peak-to-peak width in 5 minutes)
- Linearity:** Within ±1.0 % of full scale
- Repeatability:**
 ZERO: Within ±0.5 % of full scale
 SPAN: Within ±0.5 % of readings
- Drift:**
 ZERO: Within ±1.0 % of full scale per 8 hours
 SPAN: Within ±1.0 % of readings per 8 hours
 (fluctuation of ambient temperature within ±2 degC)
- Environment:**
 Ambient temperature: from 5°C to 40°C
 Ambient humidity: under 80 % as relative humidity
- Power supply:**
 100/110/115/120/200/230/240 V AC, 50/60Hz,
 single phase

- Power capacity:** Approx. 1.5 kVA as maximum
- Dimensions:**
 Analyzer unit: 508(W) x 690(D) x 143(H) mm
 20(W) x 27.2(D) x 5.6(H) in
 Sampling unit: 508(W) x 690(D) x 230(H) mm
 20(W) x 27.2(D) x 9.1(H) in
- Mass:**
 MEXA-1170HCLDA: Analyzer unit: approx. 18 kg
 Sampling unit: approx. 28 kg
 MEXA-1170HCLDV: Analyzer unit: approx. 20 kg
 Sampling unit: approx. 33 kg
- Options:**
 Heated filter (with sampling probe)
 Recorder cable for analog output (max. 10 m)
 RS-232C cable (max. 15 m)
 LAN cable (max. 50 m)
 Checker for leak check and delay check
 Remote controller for panel operation (max. 55 m)
- Approved standards:** CE, FCC

*1: A MCU of Ver. 3.00 or more is required for this optional function. Please contact to HORIBA group company office for updating MCU.

*2: T5-90 means the time interval from 5% response to 90 % response.

Award of Certification

ISO 14001 JQA-E-90039 (Head Office/Factory)
 ISO 9001 JQA-O298

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.

- The contents of this catalog are subject to change without prior notice, and without any subsequent liability to this company.
- 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.
- 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

● HORIBA, Ltd.

Head Office
 Miyayohigashi, Kisshoin
 Minami-ku, Kyoto Japan
 Phone: 81 (75) 313-8123
 Fax: 81 (75) 321-5725

Tokyo Sales Office
 1-7-8 Higashi-Kanda
 Chiyoda-ku, Tokyo, Japan
 Phone: 81 (3) 3861-8231
 Fax: 81 (3) 3861-8259

TAIWAN Representative Office
 3F, NO.18 Lane 676, Chung
 Hua Rd. Chupeli City,
 Hsinchu Hsien, 302,Taiwan
 Phone: 886 (3) 656-1012
 Fax: 886 (3) 656-8231

● HORIBA TRADING (SHANGHAI) CO., Ltd.

Shanghai Office
 Room 1103, United Plaza,
 1468 Nanjing Rd. West,
 Shanghai, 200040, China
 Phone: 21-3222-1818
 Fax: 21-6289-5553

Beijing Office
 Room 609, Jin Bao Plaza,
 89 Jin Bao Street,
 Dongcheng District, Beijing,
 100005 China
 Phone: 10-6522-7573
 Fax: 10-6522-7582

● HORIBA KOREA Ltd.

112-6 Sogong-Dong
 Choong-ku, Seoul, Korea
 Phone: 82 (2) 753-7911
 Fax: 82 (2) 756-4972

● HORIBA INSTRUMENTS

Pte. LTD.
 10 Ubi Crescent
 #05-11/12, Ubi Techpark
 Singapore 408564
 Phone: 65 6745-8300
 Fax: 65 6745-8155

● HORIBA INSTRUMENTS INCORPORATED

Irvine Facility
 17671 Armstrong Avenue
 Irvine, CA 92614, 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

● HORIBA Automotive

Test Systems Corp.
 2890 John R. Road
 Troy, MI 48083
 U.S.A.
 Phone: 001 (248) 6899000
 Fax: 001 (248) 6898578

● HORIBA / STEC

INCORPORATED
 1080 E. Duane, Suite. A
 Sunnyvale, CA 94086
 U.S.A.
 Phone: 1 (408) 730-4772
 Fax: 1 (408) 730-8975

● HORIBA GmbH

Kaplanstrasse 5
 A-3430 Tulln,
 Austria
 Phone: 43 (2272) 65225
 Fax: 43 (2272) 65230

HORIBA CZECHIA
 Organizace slozka Praha
 Petrohradská 13
 CZ-101 00 Praha 10, Czech Republic
 Phone: 420 (2) 717-464-80
 Fax: 420 (2) 717-470-64

● HORIBA INSTRUMENTS LIMITED

Kyoto Close
 Summerhouse Road
 Moulton Park, Northampton
 NN3 6FL, U.K.
 Phone: 44 (1604) 542500
 Fax: 44 (1604) 542699

● HORIBA EUROPE GmbH

Head Office
 Hans-Mess-Str.6
 D-61440 Oberursel/Ts.
 Germany
 Phone: 49 (6172) 1396-0
 Fax: 49 (6172) 137385

Leichlingen Facility

Julius-kronenberg Strasse
 D-42799 Leichlingen
 Germany
 Phone: 49 (2175) 8978-0
 Fax: 49 (2175) 8978-50

HORIBA FRANCE

12, Avenue des Tropiques
 91955 LES ULIS
 France
 Phone: 33 (1) 69-29-96-23
 Fax: 33 (1) 69-29-95-77

HORIBA SWEDEN

Sydhamnsvägen 55-57,
 SE-151 38 Södertälje,
 Sweden
 Phone: 46 (8) 550-80701
 Fax: 46 (8) 550-80567

HORIBA ITALY

Europalace
 Corso Torino 43/45
 10043 Orbassano, Torino
 Italy
 Phone: 39 (011) 9040601
 Fax: 39 (011) 9000448

● HORIBA Automotive

Test Systems GmbH
 Landwehrstrasse 55
 64293 Darmstadt
 Germany
 Phone: +49 (6151) 32-3098
 Fax: +49 (6151) 32-3865

Bulletin:HRE-2185B

Printed in Japan ZR-TF(SK)33