

## Tunable Laser Hydrogen Chloride Analyzer

# TX-100

TX-100 is HORIBA's brand new laser HCl analyzer with a probe type optical system which employs direct insert method. TX-100 is suitable for monitoring HCl concentration in incineration plants and the control of HCl removal process in various industries including cement factories and petrochemical plants, etc.

### Probe type optical system

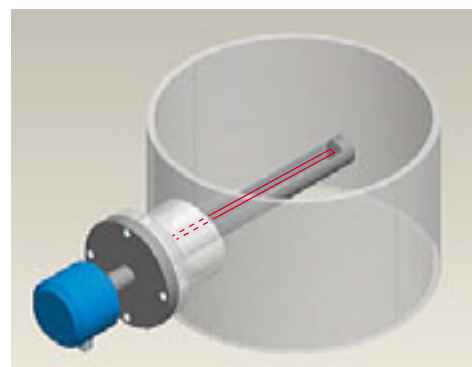
- ▶ Both laser projector and receiver are together at the same side of the analyzer
- ▶ Only one process connection tie-in is required for the installation of the analyzer
- ▶ Easy replacement to an existing analyzer (e.g. sampling type analyzer)
- ▶ The probe that maintains the optical axis performs stable analysis
- ▶ Continuous moisture correction function supports high accuracy measurement

### Laser analyzer

- ▶ Non-sampling method provides direct measurement and quick response
- ▶ Feedback control available
- ▶ Excellent long-term stability
- ▶ No maintenance for effluent treatment because no reagent is required

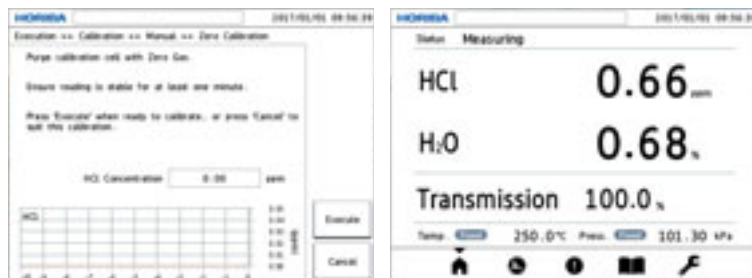
### HORIBA's original calibration mechanism

The analyzer calibrates without any disruption to the facility's operations. The zero point can be checked automatically and the signals are kept in stable condition over long term (US patent No. 8934101; patent pending for Japan, Europe, and China)



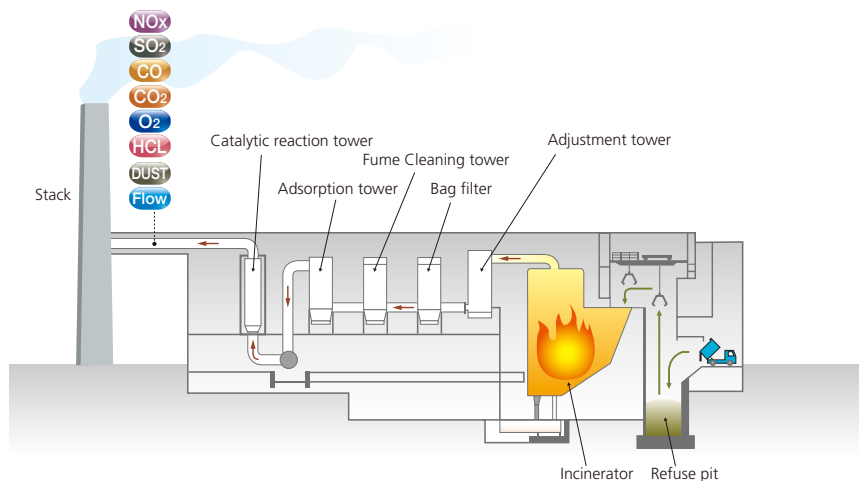
### How does the probe type optical system work?

From the same location in the analyzer, the light source and detector are attached to a probe which is inserted into the stack. A mirror installed at the tip of the probe receives and reflects the laser light through the probe, back to the detector.

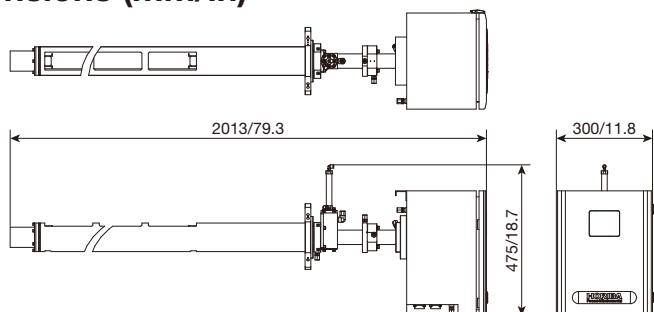


The screen with high visibility displays daily operation statuses such as measurements, etc.

# Application example: Measurement point of stack gas in an incineration plant



## Dimensions (mm/in)



## Related analyzers

### Stack Gas Analyzer

#### ENDA-5000 series

NO<sub>x</sub>, SO<sub>2</sub>, CO<sub>2</sub>, CO, O<sub>2</sub>

NO<sub>x</sub>: 0-200 to 5000ppm

SO<sub>2</sub>: 0-200 to 5000ppm

CO<sub>2</sub>: 0-5 to 25vol%

CO: 0-200 to 5000ppm

O<sub>2</sub>: 0-10 to 25vol%



### Stack Gas Dust & Flow Analyzer

#### EM-D/F 5000 series

Dust, Opacity, Gas velocity, Volume flow

Dust: 0- 0.5 to 10,000 mg/m<sup>3</sup>

Opacity: 0-100%

Velocity: 0- 3 to 50 m/s

Volume flow: 0-3000000 Nm<sup>3</sup>/h



The HORIBA Group adopts IMS (Integrated Management System) which integrates Quality Management System ISO9001, Environmental Management System ISO14001, and Occupational Health and Safety Management System OHSAS18001. We have now integrated Business Continuity Management System ISO22301 in order to provide our products and services in a stable manner, even in emergencies.



**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. Japan

**Head Office**  
2 Miyahogashi, Kisshoin, Minami-ku, Kyoto, Japan  
Phone: 81 (75) 313-8121 Fax: 81 (75) 321-5725

#### HORIBA (China) Trading Co., Ltd. China

**Shanghai**  
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  
**Beijing**  
12F, Metropolis Tower, No.2, Haidian Dong 3 Street, Beijing, 100080, China  
Phone: 86 (10) 8567-9966 Fax: 86 (10) 8567-9066

#### HORIBA Korea Ltd. Korea

10, Dogok-Ro, 6-Gil, Gangnam-Gu, Seoul-Si, 06259, Korea  
Phone: 82 (2) 753-7911 Fax: 82 (2) 756-4972

#### HORIBA Instruments (Singapore) Pte Ltd. Singapore

3 Changi Business Park Vista #01-01 Akzonobel House, Singapore 486051  
Phone: 65 (6) 745-8300 Fax: 65 (6) 745-8155

#### HORIBA Vietnam Co., Ltd. Vietnam

Unit 6, 10 Floor, CMC Tower, Duy Tan Street, Dich Vong Hau Ward, Cau Giay District, Hanoi, Vietnam  
Phone: 84 (4) 3795-8552 Fax: 84 (4) 3795-8553

#### HORIBA (Thailand) Ltd. Thailand

**East Office**  
850 / 7 Soi Lat Krabang 30 / 5, Lat Krabang Road, Lat Krabang, Bangkok 10520, Thailand  
Phone: 66 (0) 2734 4434 Fax: 66 (0) 2734 4438

#### PT HORIBA Indonesia 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 India

**Delhi**  
246, Okhla Industrial Estate, Phase 3 New Delhi-110020, India  
Phone: 91 (11) 4646-5000 Fax: 91 (11) 4646-5020  
**Technical Center**  
D-255, Chakan MIDC Phase-II, Bhamboli Village, Pune-410501, India  
Phone: 91 (21) 3567-6000

#### Bangalore

No.55, 12th Main, Behind BDA Complex, 6th sector, HSR Layout, Bangalore South, Bangalore-560102, India  
Phone: 91 (80) 4127-3637

#### HORIBA Instruments Inc. USA

**Head Office**  
9755 Research Drive, Irvine, CA 92618, U.S.A.  
Phone: 1 (949) 250-4811 Fax: 1 (949) 250-0924  
**Alvin, TX**  
5318 W.FM517 Rd, Alvin, TX 77511, U.S.A  
Phone: 1 (281) 482- 4334 Fax: 1 (281) 614-0303

#### HORIBA Instruments Brazil, Ltda. Brazil

**Head Office**  
Rua:Presbitero Plinio Alves de Souza, 645, Loteamento Polo Multivias Barirro Medeiros-Jundiai Sao Paulo CEP 13.212-181 Brazil  
Phone: 55 (11) 2923-5400 Fax: 55 (11) 2923-5490

#### HORIBA France SAS France

**Les Ulis**  
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 UK

**Northampton**  
Kyoto Close Moulton Park, Northampton NN3 6FL, UK  
Phone: 44 (1604) 542-500 Fax: 44 (1604) 542-699

#### HORIBA Europe GmbH Germany

**Head Office**  
Hans-Mess-Str.6 D-61440 Oberursel Germany  
Phone: 49 (6172) 1396-0 Fax: 49 (6172) 1373-85  
**Leichlingen**  
Julius-kronenberg Str.9 D-42799 Leichlingen Germany  
Phone: 49 (2175) 8978-0 Fax: 49 (2175) 8978-50

#### HORIBA Czech Czech

Prumyslova 1306 / 7, CZ-10200, Praha 10, Czech Republic  
Phone: 420 (2) 460-392-65

#### HORIBA (Austria) GmbH Austria

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