

HORIBA

Process & Environmental

Stack Gas Analyzer

ENDA-7000 ULTIMATE



ULTIMATE
RELIABILITY

ULTIMATE
DEPENDABILITY

ULTIMATE
ACCESSIBILITY

ENDA-7000 ULTIMATE

Experience HORIBA, the global Single Source Solutions Provider with over 50 years of technological advancements and unparalleled reliability, dependability, and accessibility.

The ENDA-7000 stack gas analyzer is designed to continuously measure the concentrations of nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), carbon dioxide (CO₂), oxygen (O₂), and ammonia (NH₃) in stack flue gas streams.

Combine your expertise with ours to create the ultimate analyzer experience including

ULTIMATE RELIABILITY

- Over 40% of all Fortune 100 customers have HORIBA analyzers installed
- Over 95% of HORIBA systems built since the turn of the century are still in operation
- Low cost of ownership

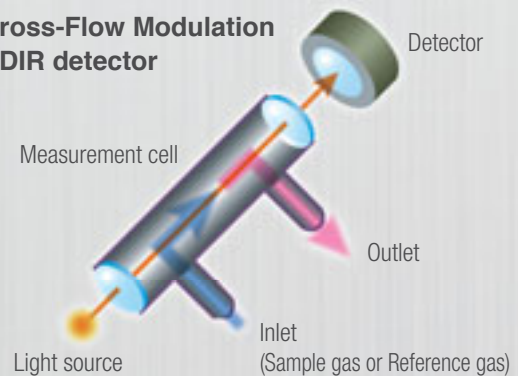
ULTIMATE DEPENDABILITY

- Proven cross-flow modulation technique, (Cross X Flo)[™]
- Continuous baseline validation (CbV)
- Backed by over 50 analytical service staff

ULTIMATE ACCESSIBILITY

- Remote Anywhere for off-site monitoring/diagnostics/control
- Routine operations through 15 inch LCD touch screen
- User Friendly interface

Cross-Flow Modulation NDIR detector



| Gas | Unit | Value | Unit | Value |
|-----------------|------|-------|------|-------|
| NO _x | ppm | 0.001 | ppm | 0.001 |
| SO ₂ | ppm | 0.001 | ppm | 0.000 |
| CO | ppm | 1.7 | ppm | 200.0 |
| CO ₂ | ppm | 0.011 | ppm | 0.000 |
| O ₂ | ppm | 0.23 | ppm | 10.00 |
| NH ₃ | ppm | 0.000 | ppm | 0.000 |

| Gas | Unit | Value | Unit | Value |
|--------|------|-------|------|-------|
| Wet CO | ppm | 0.00 | ppm | 00.00 |
| Wet CO | ppm | 0.0 | ppm | 100.0 |
| Flow | ppm | 0.00 | ppm | 10.00 |

ULTIMATE FEATURES AND VALUE

The ENDA-7000 series Continuous Monitoring System is based on HORIBA's GH-700 series analyzer. This multi-channel analyzer is capable of measuring up to six different combustion gases simultaneously when configured with the necessary detectors. Using a modular design, sensors can be added to the analyzer without sacrificing panel real estate. Therefore, the instrument can grow to meet increasing monitoring needs at a fraction of the cost of adding additional independent analyzers. The powerful GH-700 series multi-gas analyzer incorporates state-of-the-art sensor technology to minimize baseline drift and also has the functionality to coordinate and automate system operations.

The 82 available isolated analog I/O and 160 digital I/O with RS-232C, RS-485, USB and Ethernet connectivity facilitates data transfer to any data collection and archiving device. A touch screen operator interface that employs self-intuitive menus simplifies system operation.

With Remote Anywhere the ENDA-7000 series monitoring system can be accessed, controlled and monitored remotely using a smart phone. This feature is a cost savings benefit as it can eliminate unnecessary expensive onsite service calls.

The ENDA-7000 series integral sample conditioning system ensures sample integrity for accurate measurements.

FEATURES

- Compliant for USEPA 40 CFR 40/60/75 applications
- Simple operation from a touch screen operator interface
- Intuitive menus
- Accepts analog or digital inputs and controls external devices such as opacity and flow monitors and other instruments to provide common control and reporting
- Reliable, accurate measurement with accepted methods including NDIR, chemiluminescence, ultraviolet, and magneto-pneumatic technology
- Ready access power distribution panel
- High availability is assured with long-term data storage, monitoring of over 200 alarms and system diagnostics
- Easy access flow panel with optional flow sensors
- Modular design means analyzer modules can be replaced in minutes or added in the future to provide additional gas measurements
- Rugged industrial design withstands vibrations

ENDA-7000 Specification

| Component | Principle | Range |
|-----------------------|--|-------------------------------|
| NO _x (Low) | Chemiluminescence detection | 0-5/5000 ppm (dual range) |
| NO _x | Non-dispersive infrared | 0-200/5000 ppm (dual range) |
| SO ₂ (Low) | Non-dispersive ultraviolet | 0-10/1000 ppm or 0-5/1000 ppm |
| SO ₂ | Non-dispersive infrared | 0-200/5000 ppm (dual range) |
| CO (Low) | Non-dispersive infrared | 0-5/500 ppm (dual range) |
| CO | Non-dispersive infrared | 0-100/5000 ppm (dual range) |
| CO (High) | Non-dispersive infrared | 0-5% volume |
| CO ₂ | Non-dispersive infrared | 0-5/50% volume |
| O ₂ | Magneto-pneumatic | 0-5/25% volume |
| NH ₃ | Chemiluminescence detection | 0-10/100 ppm (dual range) |
| Repeatability | ±0.5% full-scale ±1.0% full-scale (Optional range) | |
| Zero drift | ±1.0% full-scale per week ±2.0% full-scale per week (Optional range) | |
| Span drift | ±2.0% full-scale per week | |
| Linearity | ±1.0% full-scale per week ±2.0% full-scale per week (Optional range or ratio) | |
| Response time | 45 seconds max. at system inlet (T ₉₀) | |
| Communication | RS-485, Ethernet (Modbus TCP/IP) | |
| Dimensions | 25.6 in (W) × 32 in (D) × 75 in (H) 651 mm (W) × 813 mm (D) × 1905 mm (H) | |



HORIBA'S GUARANTEES FOR THE SYSTEM AND SERVICES INCLUDE

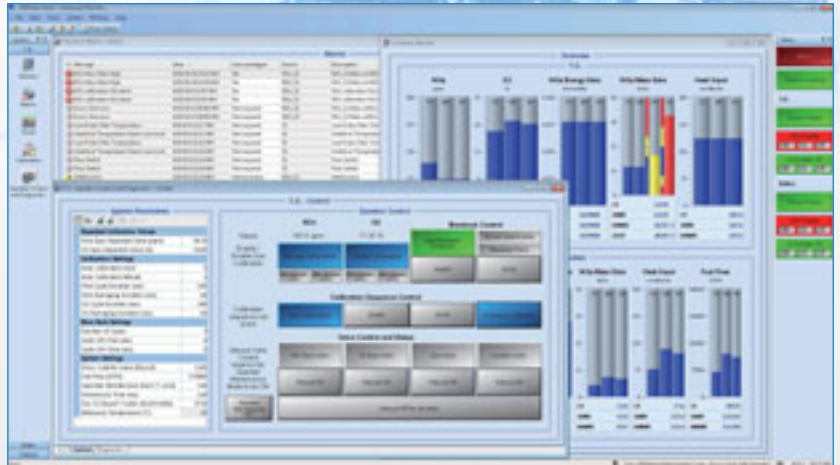
Guaranteed system up time (availability) and more importantly data capture in excess of 95%

Guaranteed successful system certification for relative accuracy results (RATAs) when accepted USEPA testing protocol is employed

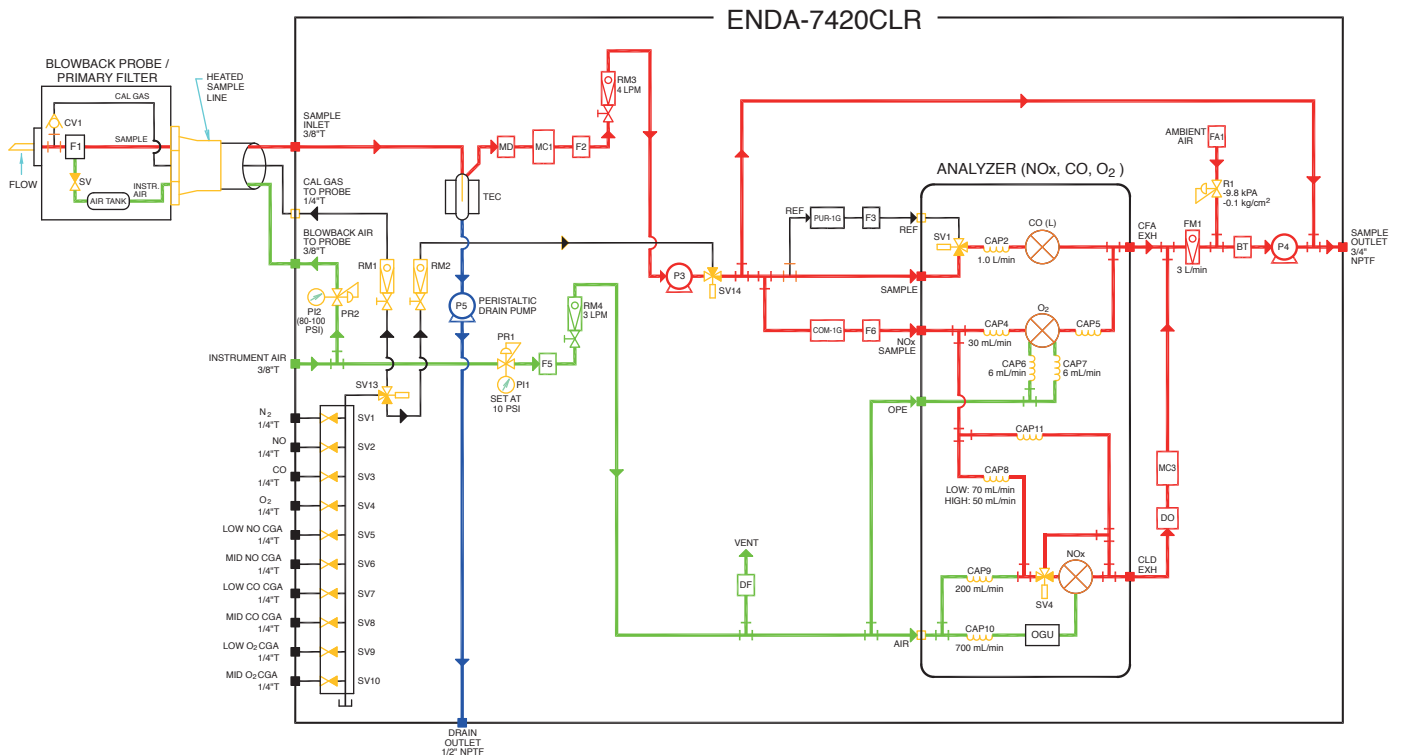
Guaranteed system manufacturing in accordance with ISO 9001, ISO 14000 and QS 9000 procedures

HORIBA ALSO OFFERS

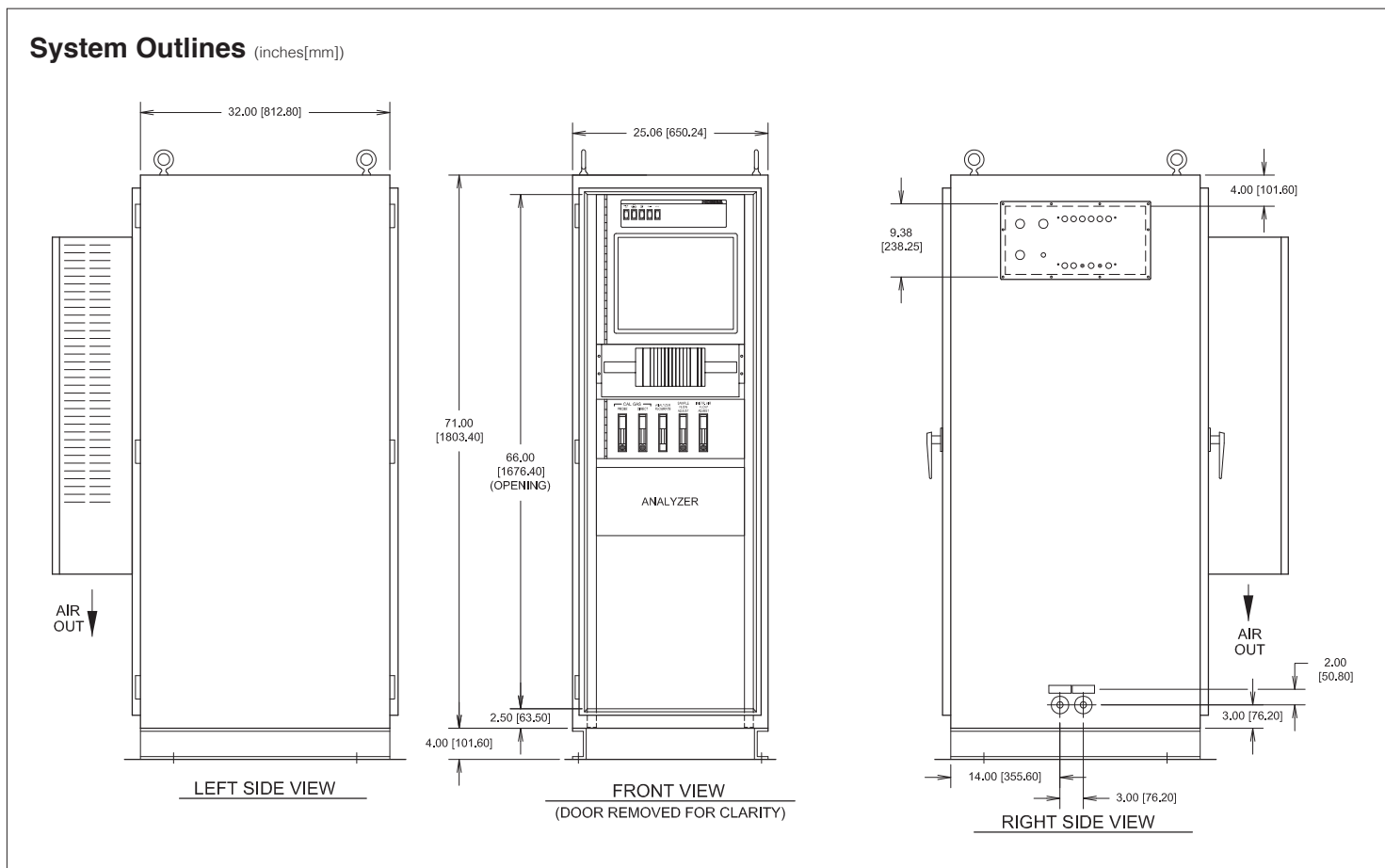
- Data Acquisition systems to meet all of your regulation reporting
- Enclosures to meet your area classification
- Turnkey Systems for a complete solution
- Services customized for your needs



FLOW SCHEMATIC (NO_x/CO/O₂)



System Outlines (inches[mm])

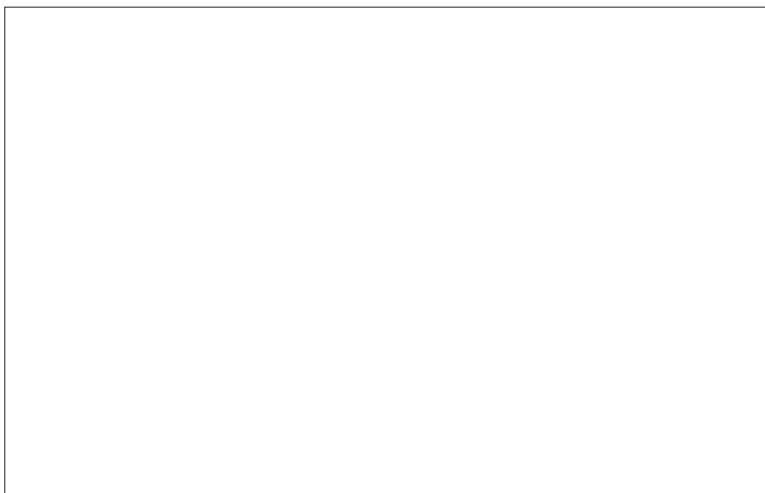


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