Accurate. Reliable. Cost Effective.

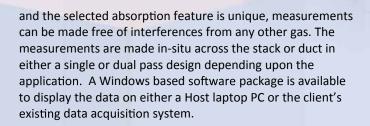
Emissions Monitoring for Compliance & Process Improvement



Model 7000 Laser Based Cross Stack Monitor For EPA Compliance or Process Monitoring NH₃, HCl, O₂, CO,H₂O, HCN, H₂S, CO₂, CH₄, HF, NO, HDO, D₂O

Features & Benefits

- **TDL** (Tunable Diode Laser) technology for unmatched accuracy & reliability
- High sensitivity ppb to percent level measurements
- One analyzer can be used for up to 8 measurement points
- Performance designed Process Monitor
 - Gas sampling/conditioning not required
 - Corrosive/toxic applications
 - Calibration not required
- Exceeds EPA CEMS Regulation requirements
 - MACT & MATS Draft PS-18 Compliant
 - Boiler MACT O2 and CO Compliance
 - Approved Zero & Span Calibration checks
- Extremely Fast (<1 second) response time
- Compact and **simple** to install
- Ambient conditions from -40° to 60° C
- Operates in high dust/moisture applications
- Unaffected by stack/duct alignment changes
- Laser located in controller allowing for simple signal control and diagnostic access
- Moisture can be added as a second channel
- Off Stack/Process extractive option
- Hazardous Area Div I & II Options



Product Description

The Model 7000 **Laser Monitor** is a continuous monitor designed to measure flue gases for both compliance and process monitoring. The Controller uses a near infrared (NIR) Tunable Diode Laser Absorption Spectrometer System utilizing a single mode "DFB" laser mounted in a thermoelectric cooler for unsurpassed accuracy and performance. Since the Spectral purity of the laser is high



Typical Applications:



Power

- HCI: EPA MATS Compliance Monitoring per PS18
- NH₃ & H₂O: Gas Fired Slip Monitoring for Process Control & EPA compliance
- NH₃: Coal Fired slip monitoring for prevention of air preheater pluggage & corrosion
- O₂ & CO: Combustion Control

Cement

- HCI: EPA PC MACT Compliance Monitoring per PS18
- CO, CO₂, O₂: Process Monitoring

Refining: • CO, CO₂, O₂, H₂S, NH₃: FCC, SRU, Furnaces & Heaters **Petrochemical:**

- HF, H₂S, CO, O₂, NH₃, Trace H₂O: SRU, Reform & Cracker Chemical
- CO, CO₂, O₂, HF, H₂O, NH₃, HCN: Process gases

Nitric Acid Production

NH₃

Aluminum Smelters:

HF in Stack

Steel Smelters • CO, CO₂, O₂, H₂O

Nickel Smelters

• H₂S, CO, CO₂

Copper Smelters

• NO **Gold Smelters**

 HCN **Pulp & Paper**

H₂S

Nuclear Processing

• HF, D₂O, HDO

Incinerators

 HF, HCl, NH₃, O₂, CO, CO₂ Nylon, **Carbon Fibers, Plastics**

HCN, O₂

Waste Water Treatment

H₂S

Ceramic/Brick • HF, HCl

Landfill • H₂S, CH₄, NH₃

Tobacco Processing CO, CO₂ as early fire detection

Automobile Exhaust

• CO, CO₂

Fertilizer • HF

Thermal Oxidizer

• 02

Analyzer Specifications:

Laser: NIR Diode laser Telecommunication grade lasers for longevity, reliability and availability

Response Time: <1 second

Detection Limits: NH₃< 0.3 ppm/m / HCl < 0.16 ppm/m. Consult Factory for other gases

Environmental Conditions: -10 to +40°C, 5 - 95% RH, 800 - 1200 mbar

Calibration: Factory Test sent with every unit Internal reference cell, external portable audit module, or in-line flow through cell

Inputs Temperature & Pressure Compensation Analog Inputs

Outputs and Networking: Qty 8, 4-20mA Analog Outputs, Dry Contacts, Ethernet,

Status relays

Dynamic Range: 5 orders of magnitude

Data Logging and Displaying Software: DataView, DataReview, (optional LasIRView diagnostic software)

Data Storage: Internal storage & External storage via Ethernet or RS232to external computer

Power Supply: Input 100 - 240 VAC @50-60Hz, +12 VDC Output: 12V, 60w, Operating Voltage: 12 VDC

Analyzer Dimensions: 6" (H) x 14" (W) x 10" (D) (15 x 35 x 25 cm) 11 lb. (5kg) *Available in desktop and 19" rackmount enclosures.

Stack/Duct Optics:

Base: 6" (H) x 9" (W) x 14.5" (D) 11.5 | lb (5.2 kg) NEMA 4xFiberglass Enclosure

Mounting: 4"OD ANSI flanges, additional sizes optional.

Air Purge Requirements: - depending on conditions 50 psi @ 25 L/min (Blower purge systems available)

Environmental Conditions: Gas: -100 to +1800 °C, 5-95% RH, 25-2000 mbar Optics: -40 to 55°C, 5-95% RH, 25-2000 mbar Detector up to 90°C



Available in 2, 4, & 8 channel configurations

CEMTEK KVB-Enertec

ЕМТЕК 3041 S. Orange Ave. Santa Ana, CA 92707 USA 714.437.7100 **VR-Fnertec**

2849 Sterling Drive Hatfield, PA 19440 USA 215.996.9200

5829 West Sam Houston Parkway N. Suite 707 Houston, TX 77041 USA 832.776.0848

www.cemteks.com | 888-400-0200 | email: sales@cemteks.com