

MAX-iAQ™ Air Quality Monitoring System

Ethylene Oxide

The MAX-iAQ™/eo is a fully automated FTIR-based ambient air monitoring system capable of sequentially analyzing up to **20 sample lines** for ethylene oxide. The comprehensive design provides complete control of sample streams via an integrated multiplexer that maintains continuous sample gas flow on each channel. The multiplexer also incorporates sampling and bypass pumps, a PLC controller and touchscreen HMI. All sample, calibration gas and nitrogen connections are neatly aligned on the rear of the system for quick coupling.

The heart of the MAX-iAQ™/eo is our FTIR gas analyzer with **proprietary MAX StarBoost™ technology** optimized specifically for single-digit ppb ethylene oxide detection. Unique in the marketplace, MAX StarBoost™ technology provides **detection limits as low as 5 ppb** and a wide dynamic range. In addition, the analyzer never requires calibration and utilizes a Peltier-cooled MCT detector that allows for 24/7/365 continuous operation.

In addition to powerful sampling and analysis capabilities, the MAX-iAQ™/eo comes complete with user-friendly MAX-Acquisition™ factory automation software and a large touch screen for viewing system diagnostics and alarms. A Factory Interface Module is also available to provide seamless factory integration and data publishing to your existing infrastructure.

The MAX-iAQ™/eo is a complete factory ready ambient air monitoring solution developed for multipoint low-level detection of ethylene oxide, even in high humidity environments. Please contact our Applications Group (applications@maxanalytical.com) today for further information on your specific needs.



MAX-iAQ™/eo Product Specifications

Product Dimensions

- 26" (W) x 75" (H) x 35" (D)
- [58 x 168 x 89 cm]
- ~400 lbs. [180 kg]

Performance Specifications

- 5ppb ethylene oxide LOD
- 0-100 ppm ethylene oxide calibration range
- ± 4% analytical uncertainty
- Zero drift of ≤ 5ppb

Automated Sample Multiplexer

- 20 Channels with continuous flow
- HMI and PLC controlled
- Diaphragm sample and bypass pumps
- Heated cabinet
- N₂ and calibration gas input ports

Factory Interface Module

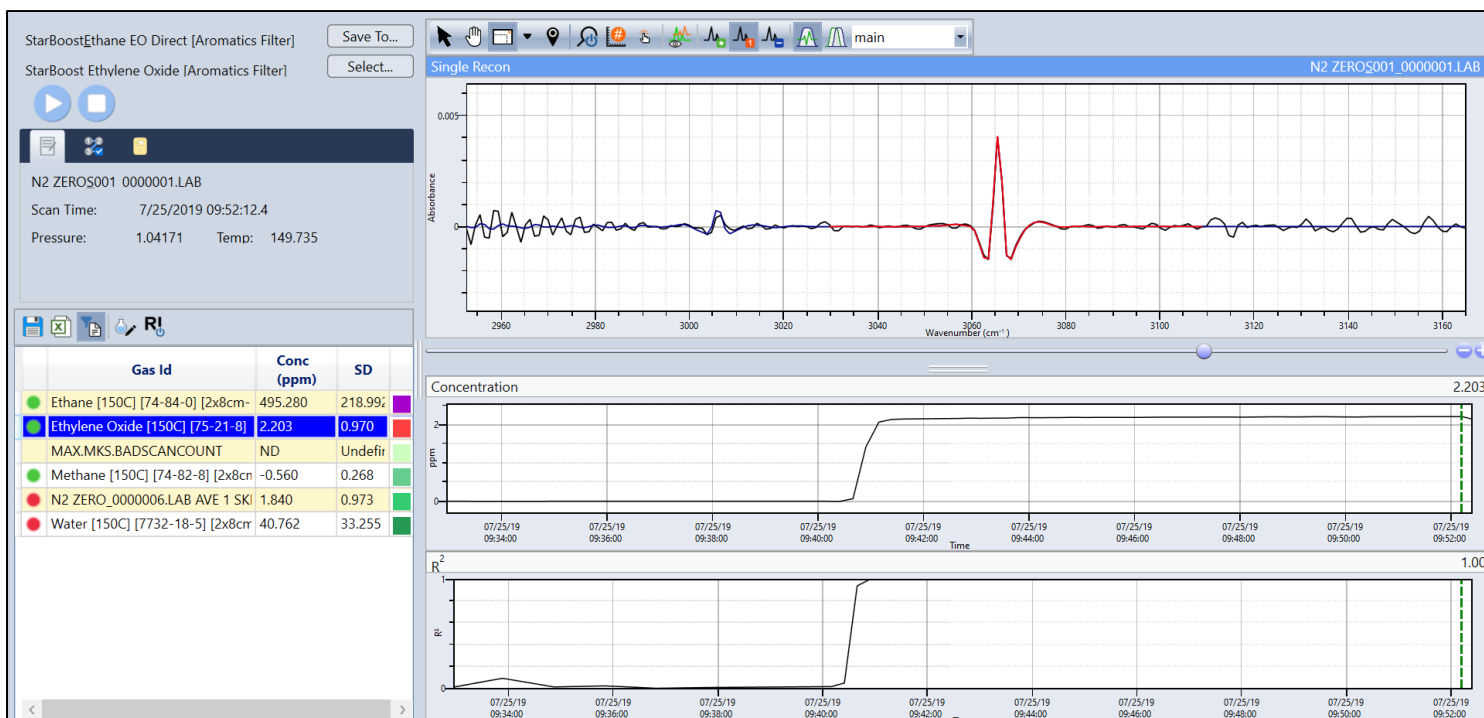
- Analog inputs (external sensors)
- Analog outputs (concentration data to DCS)
- Digital outputs (health, state & alarms)

StarBoost™ FTIR Technical Specification

- Process FTIR with StarBoost™ enhancement
- 5.11 m low maintenance gas cell
- 4 μm TE-cooled MCT
- AutoRef algorithm to eliminate zero drift

MAX-Acquisition™ Data Collection Software

- Controls all data acquisition from one UI
- Perform all data analysis
- Displays real-time quantitative results
- View diagnostics and configure alarm alerts
- Modbus – TCP/IP for factory interface



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