

**REAL-TIME ANALYSIS**

# MAX-CAT™

**A Versatile, Cost Effective  
Solution for Fast, Real-Time  
Quantitative Analysis**



**Precise**

---

**Fast**

---

**Reliable Analysis**

- Real-time, multi-species detection of any gas or vapor
- Compact footprint
- Excellent sensitivity
- Flexibility to meet your application requirements
- Easy-to-use quantitative analysis

# Key applications

- Gas analysis
  - Evolved gas
  - Reaction dynamics
  - Pure gas
- Catalysis research
- Material Studies
  - Outgassing
- Fermentation & bioreactor monitoring
  - Aerobic and/or anaerobic
- Dissolved gases
  - Headspace analysis
- Environmental research

## MAX-CAT: Cost Effective, Versatile Mass Spectrometer

*Fast, high-sensitivity, quantitative gas analyzer for catalysis, reaction monitoring, lab and research, and more!*

The MAX-CAT™ from Process Insights is a real-time gas analyzer to monitor multiple analytes in numerous applications ranging from small scale research to continuous operation.

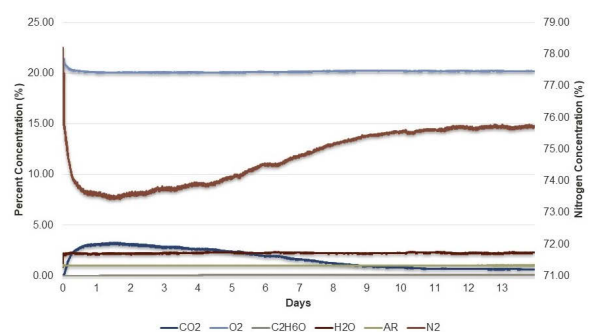
This flexible platform offers quantitative and qualitative analysis from ppb to percent levels without the need for front end separation. The intuitive, user-friendly HMI can be set to output concentration trends on all analytes in easy to read (or export) tabular and or graphical formats.

Our MAX-CAT system can easily add (or delete) analytes of interest which makes it a unique solution when parameters of interest may change or multiple groups share common gas analyzers. Our on board “Survey Scan” capability provides a full spectra showing trends and changes where dedicated systems cannot.

Fast and powerful, this quadrupole mass spectrometer performs high precision quantitative "real-time" analysis on every component in a gas or vapor mixture, and can be equipped for the fully-automated sampling of multiple gas channels.

The MAX-CAT is fast, compact, and easy to use. It can measure any gas or vapor sample concentration from ppb levels to 100%.

### 14 Day Fermentation Run

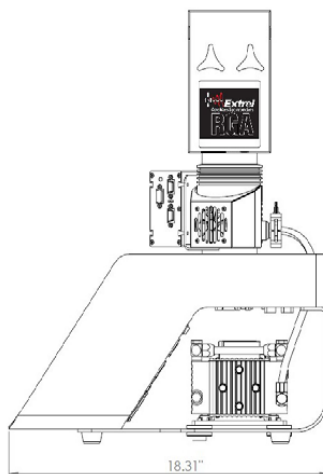
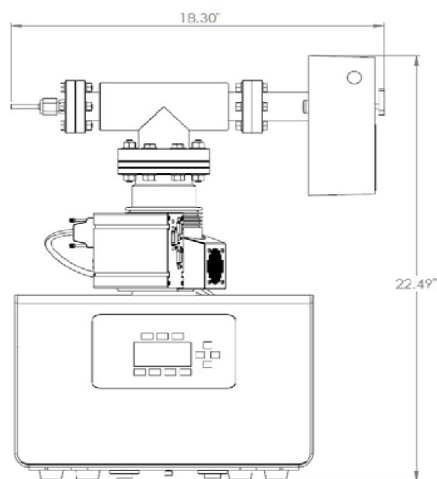


### Analyzer Features

- Measures any gas or vapor sample
- Real-time analysis of the input and effluent streams reveals what is happening in the reaction
- Fast response: measures changes to sample concentration in <300 ms
- High sensitivity: detection limit 50 ppb
- Data acquisition: up to 1000 measurements/second
- 1-100, or 1-300 amu mass range
- Complete quantitative sample composition
- Sample selector options for up to 61+ sample streams

# SPECIFICATIONS

System Highlights:	
Detectable compounds	Any gas or vapor sample
Detection range	Faraday/electron multiplier - Analysis range: $1 \times 10^{-6}$ - $5 \times 10^{-13}$ Torr (100% - 0.5 ppm)* - Low detection limit: $5 \times 10^{-14}$ Torr (50 ppb)**
Analysis rate	Up to 1000 measurements per second
Gas consumption	10 $\mu$ L/min
Heated inlet option available	
Ionization energy control for reduced fragmentation	
Software	- VacuumPlus control software, standard - Questor5 upgrade, optional
Computer interface	RS-232C or USB
Filaments	Dual-filament design - Over-pressure protection provided by built-in Pirani and BA gauges
Mass range options	1-100, 1-300 amu
6 mm quadrupole mass filter	
Weight	55 lbs. (25 kg)
Power supply	110/230 VAC, 50/60 Hz
Dimensions (L x W x H)	465 x 465 x 571 mm
Standard inlet length	50 cm



\* Documented on trace benzene in air.

\*\* Based on the analysis of 1% argon.

## GAIN REAL-TIME INSIGHT INTO YOUR PROCESS

Process Insights manufactures and delivers premium sensors, monitors, detectors, analyzers, instrumentation, and software that are mission-critical to keep your operations, personnel, and the environment safe – every day across the globe.

Get the most reliable, precision analytical technologies available on the market today. We will work to match your needs and budget, and provide the optimal, and most stable process analysis solution for your application.

---

## CENTERS OF EXCELLENCE | PROVIDING PROVEN SOLUTIONS

Process Insights is committed to solving our customers' most complex analytical, process, and measurement challenges everyday.

### Process Insights – The Americas

4140 World Houston Parkway Suite 180, Houston, TX 77032, USA +1 713 947 9591

### Process Insights – EMEA

ATRICOM, Lyoner Strasse 15, 60528 Frankfurt, Germany +49 69 20436910

### Process Insights – APAC

Wujiang Economic and Technology, Development Zone, No. 258 Yi He Road, 215200 Suzhou Jiangsu Province, China +86 400 086 0106

---

For a complete range of products, applications, systems, and service options, please contact us at: [info@process-insights.com](mailto:info@process-insights.com)

For a complete list of sales & manufacturing sites, please visit: <https://www.process-insights.com/about-us/locations/>

COSA Xentaur, Tiger Optics, Extrel, Alpha Omega Instruments, ATOM Instrument, MBW Calibration, MGA, Guided Wave, ANALECT and LAR TOC Leader are trademarks of Process Insights, Inc.



REVOLUTIONIZING MEASUREMENT

**EVERYWHERE**