

MAX300-IG

Product Note GP-212J

Extrel® MAX300™-IG Process Mass Spectrometer

The MAX300-IG Industrial Gas Analyzer is the latest industrial system in the Extrel family of high performance quadrupole mass spectrometers. This seventh generation on-line process mass spectrometer is designed to meet the ever-changing needs of customers worldwide.

To complement your MAX300-IG system, Extrel offers the widest and most flexible array of inlet systems, including solenoids and both small and large internal diameter rotary valves. The MAX300-IG can be configured with as many sample positions as you need to optimize your application.

Hardware Specifications:

Mass Analyzer:	3/4" (19 mm) High Transmission Quadrupole Mass Filter
Mass Range:	2 - 250 amu standard, 2 - 300 amu optional
Detectable Components:	Any gas or vapor with a molecular weight or fragment ion within the mass range
Number of Components:	Unlimited
Masses per Component:	Unlimited; allows multivariate analysis
Upper Detection Limit:	100%
Lower Detection Limit:	For components with no interference Faraday: 10 parts per million (ppm) Electron Multiplier: 10 parts per billion (ppb)*
Dynamic Range:	Faraday: 5 orders of magnitude (10^5) Dual Faraday/Multiplier: 8 orders of magnitude (10^8)
Analysis Rate:	Typically 400 milliseconds per component
Analysis Precision:	+/- 0.0025 absolute, based on a 1% Argon concentration with no interferences
Analysis Stability:	+/- 0.005 absolute, over 30 days, on a 1% Argon concentration with no interferences
Filaments:	Two, one active and one spare with automatic switchover for continuous operation
Sample Streams:	Unlimited
Trend/Display Windows:	Unlimited
Analysis Methods:	Unlimited
Sequence Methods:	Unlimited
Alarm Methods:	Unlimited
Derived Values:	Unlimited
Scanning Mode:	Capable of scanning user selected mass ranges or the entire analyzer mass range

*As documented on trace analysis of benzene in air



MAX300-IG Applications

Petrochemical

Acetic Acid ■ Acrylonitrile
Ambient Air Monitoring ■ Ammonia
Catalysis Research ■ Ethylene
Ethylene Oxide ■ Fuel Gas/Natural Gas
Hydrogen ■ Methanol
Polyethylene/Polypropylene ■ Vinyl Chloride

Metals Production

Basic Oxygen Process ■ Blast Furnace
Carburization ■ Coke Oven
Fuel Gas ■ Gas Mixing Stations
Vacuum Decarburization

Pharmaceutical

Ambient Air Monitoring ■ Dryers/Vacuum Dryers
Fermentation Headspace ■ Lyophilizer Monitoring
Solvent Recovery ■ Waste Water Analysis

Semiconductor/Gas Production

Ambient Air Monitoring ■ Argon in Oxygen
Scrubber/Burnbox Efficiency
UHP Gas Impurities
Waste Water Analysis



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Power:

Recommended Power Supply:

110V Analyzer: Two 115 VAC, 50/60 Hz, 15 Amp circuits
 220V Analyzer: One 230 VAC, 50/60 Hz, 20 Amp circuit

Output Power:

Nominal: 2500 Watts
 Maximum: 2750 Watts

Heat Load: 2500 Watts (~8500 BTU/Hr)

Typical Physical Dimensions:

Analyzer Weight: Approximately 420 lbs (190 kg)

Cart Weight: Approximately 40 lbs (18 kg)

Dimensions with A/C and Cart:

Height: 63.3" (161 cm)
 Depth: 25.25" (64 cm)
 Width: 47.8" (122 cm)

Ambient Requirements:

Ambient Temperature: -4°F to 120°F (-20°C to 49°C)
 with A/C cold start \geq 54°F (12°C)

Area Classifications:

General Purpose
 Class I, Division 2 Groups B, C, D, T3,
 Class I, Division 1 Groups B, C, D, T3
 ATEX Zone 1, Group II B + H2, T4
 (Refer to Product Note GP-214A)

Data System, Software and Communications:

Software: Extrel Questor 5 Process Control Software, a web-based user interface

3 User Security Levels: Administrator, User, Viewer

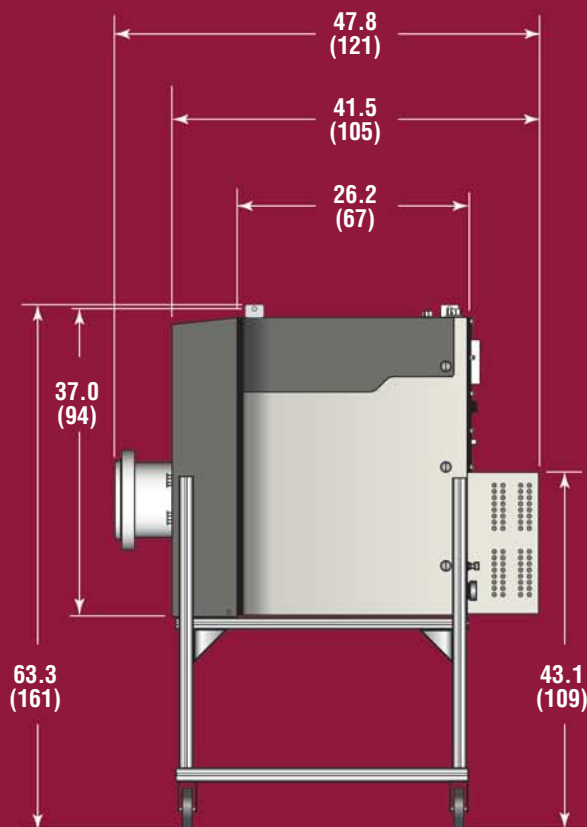
Display Unit:

Information and control is transmitted and displayed via Ethernet to a PC with Microsoft Windows® XP operating system and Internet Explorer® browser

Analog Inputs and Outputs: Unlimited

Digital Inputs and Outputs: Unlimited

Communications: Ethernet, Bi-directional modbus RTU or TCP/IP, OPC and Analog Outputs



Dimensions in inches (cm)

Figure 1:
 Front View
 MAX300-IG with A/C
 and Cart

Extrel CMS maintains sales and service offices around the world. Please contact us for the office nearest you or visit our web site.

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