

MAX300-IG Product Note GP-212G

Extrel® MAX300™-IG Process Mass Spectrometer

The MAX300-IG Industrial Gas Analyzer is the latest 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.



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

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

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Power:

Recommended Power Supply:

110V Analyzer: Two 110 VAC, 50/60 Hz, 20 Amp circuits

220V Analyzer: One 220 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: 61 1/2" (1561 mm)

Depth: 25 1/4" (640 mm)

Width: 47 13/16" (1215 mm)

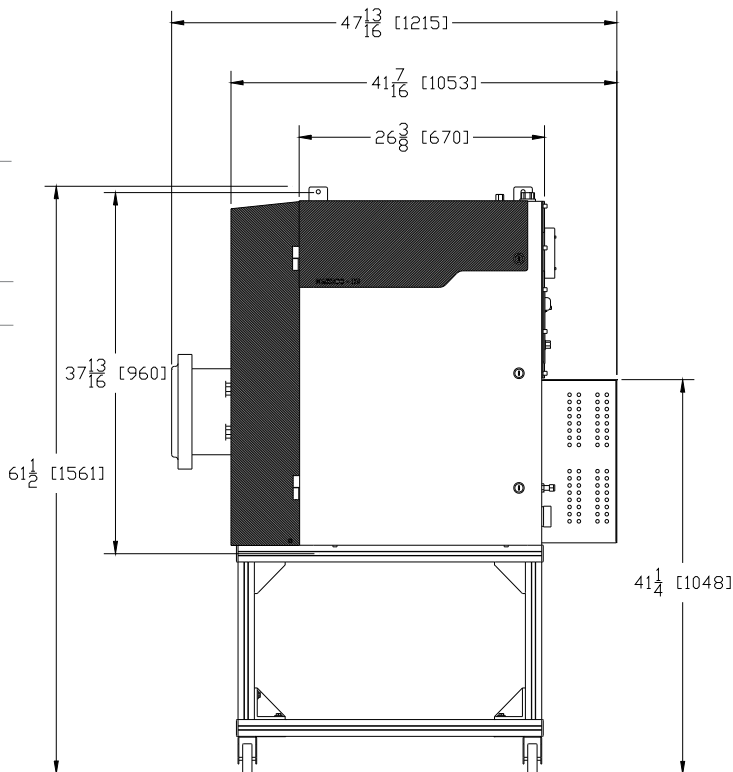


Figure 1: Front View MAX300-IG with A/C and Cart

Ambient Requirements:

Ambient Temperature: -15°F to 120°F (-26°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, T3 or T4

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

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

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