



# Agilent 220 Ion Trap Mass Spectrometer

## Data Sheet

### Overview

The Agilent 220 MS along with the Agilent 7890A GC provides flexibility, throughput and performance in an easy-to-use system.



**Agilent Technologies**

## **Agilent 220 MS Specifications**

### **Mass Analysis**

- Mass range: 10 to 650 Da; scan range is time programmable throughout the run
- Resolution: Unit mass resolution over the entire mass range
- Mass calibration stability: RF-only field is stable for weeks to several months at constant analyzer temperature and helium flow
- Scan rate: 5600 Da/s
- Maximum ionization time: 25 ms
- Selected Ion Storage (SIS): Stores up to five range of ions; ejects matrix, column bleed
- Analytical linear dynamic range:  $10^3$  to  $10^4$  (compound and method dependent)
- Filament assembly: Dual filament both in EI and CI
- Transfer line temperature: maximum 350 °C
- Manifold temperature: maximum 120 °C
- Analyzer temperature: maximum 250 °C
- Electrode surface: Chrome (standard)

### **Software**

- MS Workstation (MSWS) for acquisition, automation and qualitative and quantitative data review; simultaneous MS and GC data collection; can collect 2 GC detector signals while acquiring MS data; automatic MS file format conversion to MassHunter
- MassHunter for qualitative and quantitative data review

### **Vacuum System**

- Turbomolecular pump: V-81 pump, air cooled, and thermostatically protected; 81 L/s capacity

### **Foreline Pump**

- DS-42, dual stage, rotary vane
- Voltage: 120, 230 V
- Pumping speed greater than 38 L/min ( $2.3 \text{ m}^3/\text{hr}$ )
- Oil mist eliminator (optional)

### **Optional MS Features**

- MS/MS and  $\text{MS}^n$ : CID using frequency modulated resonant or non-resonant energy modes; Full scan product ion spectrum
- Positive Chemical Ionization (PCI): Clean, low pressure PCI compatible with gas or liquid reagents; kit for single liquid or gas reagent included; optimized EI/CI switch within the same analytical run
- SilChrom electrodes: Silica-coated electrodes for maximum chromatographic inertness

## Optional Software

- EnviroPro for general and EPA specific report requirements
- ToxPro Plus includes three-ion ratio reports for toxicology applications
- MultiCompound for general extended reporting
- Access control and audit trail software for 21 CFR Part 11 compliance
- Spectral databases: National Institute of Standards and Technology (NIST), Wiley and Maurer Pfleger Weber (MPW) libraries are available

## Performance Specifications

### Scan rate at 5600 Da/s

Mode	Test standard	S/N
El full scan	1 pg octafluoronaphthalene	50:1
Cl full scan	5 pg benzophenone	20:1

## Power Requirements

- 100–130 Vac, 60 Hz  $\pm$  3 Hz, 12 A, 1.5 kW
- 200–260 Vac, 50 Hz  $\pm$  3 Hz, 6 A, 1.5 kW

## Environmental Requirements

- Temperature: 15 °C to 30 °C
- Humidity: 20% to 80% relative humidity (without condensation)

## Gas Chromatograph (Agilent 7890A GC System)

For more specifications on GCs refer to the GC Data Sheet

Injector	Split/splitless, Multi-mode inlet, PTV
Autosampler	7693 ALS, CombiPAL, 7697A Headspace Sampler
Oven temperature	Ambient + 4 to 450 °C
Oven ramps/plateaus	20/21. Negative ramps are allowed.
Electronic pneumatic control (EPC)	Auto pressure regulation for split/splitless, septum purge
Carrier gas control modes	Constant pressure and flow modes; pressure and flow programmable
Pneumatic splitter	Capillary Flow Technology for backflushing

## Weight and Dimensions

	Weight		Height		Depth		Width	
	Kg	lbs	cm	in	cm	in	cm	in
<b>220 MS</b>	23	50.7	50	19	62	24	24	9
<b>DS 42 foreline pump*</b>	11	24.3	38	15	21	8	21	8
<b>7890A GC</b>	45	99	57	22	54	21	58	22.8

\*with optional oil mist eliminator

## For More Information

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