4200 MP–AES
Site Preparation Checklist

Thank you for purchasing an Agilent **instrument**. To get you started and to assure a successful and timely installation, please refer to this specification or set of requirements.

Correct site preparation is the key first step in ensuring that your instruments and software systems operate reliably over an extended lifetime. This document is an **information guide AND checklist** prepared for you that outlines the supplies, consumables, space and utility requirements for your equipment for your site.

Customer Responsibilities

Make sure your site meets the following prior specifications before the installation date. For details, see specific sections within this checklist, including:

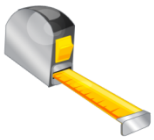
- ❑ The necessary laboratory or bench space is available.
- ❑ The environmental conditions for the lab as well as laboratory gases, plumbing and air extraction.
- ❑ The power requirements related to the product (e.g., number & location of electrical outlets).
- ❑ The required operating supplies necessary for the product and installation.
- ❑ Please consult Other Requirements section below for other product-specific information.
- ❑ For more details, please consult the MP-AES Site Preparation Guide (G8000-90001) and User's Guide (G8000-90002).

If Agilent is delivering installation and familiarization services, users of the instrument should be present throughout these services; otherwise, they will miss important operational, maintenance and safety information.

Important Customer Information

1. If you have questions or problems in providing anything described as a Customer Responsibilities above, please contact your local Agilent or partner support/service organization for assistance prior to delivery. In addition, Agilent and/or it's partners reserve the right to reschedule the installation dependent upon the readiness of your laboratory.
2. Should your site not be ready for whatever reasons, please contact Agilent as soon as possible to re-arrange any services that have been purchased.
3. Other optional services such as additional training, operational qualification (OQ) and consultation for user-specific applications may also be provided at the time of installation when ordered with the system, but should be contracted separately.

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Dimensions and Weight

Identify the laboratory bench space before your system arrives based on the table below.

Pay special attention to the **total height and total weight requirements for all system components you have ordered and avoid bench space with overhanging shelves**. Also pay special attention to the total weight of the modules you have ordered to ensure your laboratory bench can support this weight.

Special Notes

1. The workbench should be about 90 cm (36 in) high. Remember to provide space for the computer, monitor and printer.
2. Allow at least 400mm of space on both sides to permit service access, and 200mm at the rear of the system to permit free air circulation and installation of accessories.
3. Power cord and all other connections are located at the side of the instrument. The Power switch is located on the side panel.
4. Do not open any of the shipping containers unless a representative of Agilent Technologies is present.
5. Some of the containers in the delivery to your site are heavy. To avoid injury to personnel or damage to equipment, always use appropriate lifting devices. It is the customer's responsibility to supply the necessary lifting devices, and make arrangements to unload the truck and transport the containers to your site.
6. All doorways, hallways, floors and elevators must be able to handle the largest, heaviest container.

Instrument Description	Weight		Height		Depth		Width	
	Kg	lbs	mm	in	mm	in	mm	in
MP-AES 4200 packed	100	220	980	38.6	815	32	1170	46
MP-AES 4200 unpacked	73	161	660[1]	26	660[2]	26	960	37.8

[1] Height of the unpacked instrument increases to 740 mm with air extraction duct collar

[2] Depth of unpacked instrument increases to 714mm with the External Gas Control Module (EGCM)

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Environmental Conditions

Operating your instrument within the recommended temperature ranges insures optimum instrument performance and lifetime.

Special Notes

1. Performance can be affected by sources of heat & cold e.g. direct sunlight, heating/cooling from air conditioning outlets, drafts and/or vibrations.
2. The site's ambient temperature conditions must be stable for optimum performance.
3. For optimum analytical performance, it is recommended that the ambient temperature of the laboratory be between 20 and 25 °C.
4. Maximum Altitude 4000m.

Instrument Description	Operating temp range °C	Operating humidity range (%)	Heat Dissipation (W)
4200 MP-AES Non-operating (transit)	-40-70 °C (-40 to 158 °F)	< 90	
4200 MP-AES Operating within performance specifications	15 to 30 (0-3000 m) 15 to 25 (3000-4000m)	50 to 80	200
4107 Nitrogen Generator Non-operating (transit)	-40 to 70 (-40 to 158 °F)	< 90	
4107 Nitrogen Generator Operating within performance specifications	5 to 35 (0-3000 m) 5 to 25 (3000-4000m)	50 to 80	

5. User safety requires that the exhaust gases from the plasma be vented externally to the building and not re-circulated by the environmental control system. Health hazards include chemical toxicity of solvents, samples, and plasma gases
6. The customer is responsible for supplying the ductwork between the instrument and the lab extraction system
7. The MP-AES Spectrometer requires clean, dry, non-corrosive air for cooling purposes. This is supplied to the instrument through an air supply vent located at the top, rear of the instrument.. The introduction of cooling air contaminated with high levels of acid vapor or other corrosive substances may cause damage to the instrument. In such circumstances it is strongly recommended that the cooling air be supplied from an environmentally controlled area that is away from the instrument exhaust and any other area where corrosive materials are stored or used.

Cooling Air Supply	Minimum Flow	Recommended Agilent Duct Kit
Air Intake	3 m^3/min	xxxxxxx
Plasma Exhaust	3 m^3/min	xxxxxxxx

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Power Consumption

Special Notes

1. If a computer system is supplied with your instrument, be sure to account for those electrical outlets.
2. A separate power outlet receptacle should be provided for the 4200 MP-AES system.
3. Good electrical grounding is essential to avoid potentially serious shock hazards. A 3-wire outlet with ground connection must be provided for the 4200 MP-AES. Make certain that power outlets are earth-grounded at the grounding pin.
4. All power supplies for the 4200 MP-AES must be single-phase, AC voltage, three-wire system (active, neutral, earth) and should be terminated at an appropriate power outlet receptacle that is within reach of the power cord.
5. The use of extension cords or outlet adaptors is not recommended.

Instrument Description	Line Voltage & Frequency (V, Hz)	Maximum Power Consumption (VA)	Maximum Power Consumption (W)
4200 MP-AES	200-240 VAC @ 50-60 Hz	2.04kVA	
SPS3 Auto Sampler	100-240 VAC 50-60 Hz	220 VA	
4107 Nitrogen Generator	100-240 VAC (24 V DC Plug Pack)	50 VA	

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Gases Requirements

The 4200 MP-AES requires the supply of up to four different compressed gases depending on your instrument configuration and accessories; Nitrogen (x2), Argon and Oil Free Compressed Air.

Special Notes

1. Operation of the MP-AES requires the use of compressed gases. Pressurized gases are hazardous, when connecting or disconnecting these observe the appropriate safety precautions.

Compressed Gas	Purity	Typical Working Pressure kPa (psi)	Consumption (L/min)
Nitrogen (plasma support gas)	>99.5% <0.5% Oxygen < 4ppm Water vapour	450-600 (65-87)	0-25
Nitrogen (monochromator purge)	>99.95% <0.05% Oxygen < 4ppm Water vapour	450-600 (65-87)	0-10
Compressed Air (Nitrogen Generator)	ISO 8573-1:2010 CLASS 8.4.3	620-750 (90-109)	115
Compressed Air (POP Gas, EGCM, Monochromator Air Purge)	ISO 8573-1:2010 CLASS 1.4.3	450-600 (65-87)	POP Gas : 0-25 EGCM Organics : 0-1.5 Mono Air Purge : 0-10
Argon	99%	200-440 (29-63)	0-1.5

Special Note About Compressed Air

The production of compressed air can produce significant amounts of water vapour and droplets. If these are not effectively removed this can reach the 4200 MP-AES in the form of a liquid. This will cause instrument damage or malfunction. The specification of the compressed air supply has been arrived at to ensure that such problems will not occur.
Air compressor installations that meet the specified requirements will include a drying stage and possibly several filtration stages. It is very highly recommended to consult a professional compressed air supplier to ensure that your compressed air quality meets the required ISO specifications. Basic industrial or domestic installations will not meet these requirements. Using compressed air that does not meet Agilent's specification may result in damage or malfunction of the 4200 MP-AES.

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Optional Operating Supplies by Customer

Special Notes

1. For information on Agilent consumables, accessories and laboratory operating supplies, please visit http://www.chem.agilent.com/en-US/Products/consumables/Pages/default.aspx



Other Requirements

Use of the MP-AES 4200 system and accessories may involve materials, solvents and solutions that are flammable, corrosive, toxic or otherwise hazardous.

Careless, improper, or unskilled use of such materials, solvents and solutions can create explosion hazards, fire hazards, toxicity and other hazards which can result in death, serious personal injury, and damage to equipment and property.

ALWAYS ensure that laboratory safety practices governing the use, handling and disposal of such materials are strictly observed. These safety practices should include the wearing of appropriate safety clothing and safety glasses.

Your Agilent 4200 MP-AES spectrophotometer has been designed to comply with the requirements of the Electromagnetic Compatibility (EMC) Directive and the Low Voltage (electrical safety) Directive (commonly referred to as the LVD) of the European Union. Agilent has confirmed that each product complies with the relevant Directives by testing a prototype against the prescribed EN (European Norm) standards.

Important Customer Web Links

- ❑ For additional information about our solutions, please visit our web site at http://www.chem.agilent.com/en-US/Pages/HomePage.aspx
- ❑ Need to get information on your product?
  Literature Library - http://www.agilent.com/chem/library
- ❑ Need to know more?
  Customer Education – http://www.agilent.com/chem/education
- ❑ Need technical support, FAQs? – http://www.agilent.com/chem/techsupp
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