

Ultivo Hardware - 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.

Customer Responsibilities

Make sure your site meets the following 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 and plumbing
- 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 product-specific Site Preparation or Pre-Installation manual (delete this line if a Site Prep Guide does not exist).

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 Responsibility above, please contact your local Agilent or partner support/service organization for assistance prior to delivery. In addition, Agilent and/or its 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.**

Special Notes

1. Agilent Ultivo LC/TQ dimensions represent the maximum cabinet dimensions with a Spray Chamber installed.
2. At least 30 cm (1 ft.) to the left, right and rear of the instrument must be added to the dimensions to provide adequate instrument access and ventilation.
3. The supporting surface must be relatively vibration free and capable of supporting the combined weight of the Agilent Ultivo LC/TQ system.

Instrument/Spray Chamber/Foreline Pump	Weight		Height		Depth		Width	
	Kg	lbs	cm	in	cm	in	cm	in
G6465A Ultivo LC/TQ	59.0	130.0	32.0	12.6	79.0	31.1	39.0	15.4
Agilent Jet Stream	1.7	3.8	23.0	9.0	11.5	4.5	18.0	7.0
G1948B Electrospray Source	1.7	3.8	17.0	6.6	9.5	3.7	18.0	7.0
G1947B APCI Source	1.7	3.8	23.0	9.0	13.0	5.1	18.0	7.0
MS40+ Foreline Pump	33.0	72.7	29.7	11.6	41.8	16.5	22.8	8.9

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.



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. The Agilent Ultivo LC/TQ is specified for operation under the following conditions:

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- a. Indoor use
 - b. Constant temperature (< +/-3°C from calibration temperature)
 - c. Non-condensing, non-corrosive atmosphere.
4. Altitude: Not to exceed 3,300 m up to 35°C, not to exceed 3,700 m up to 30°C.

Instrument Model	Operating temp range °C (F)	Operating humidity range (%)	Heat Dissipation (BTU)
G6465A Ultivo LC/TQ	15 - 35 °C (59 - 95 °F)	< 85% RH @ 35 °C	< 4500 BTU/hr



Power Consumption

Special Notes

1. If a computer system is supplied with your instrument, be sure to account for those electrical outlets.
2. The LC/TQ electrical outlet(s) must have an isolated, noise-free electrical ground that is connected to the main earth ground for the facility.
3. Mains supply voltage tolerances must be between +10% and -5% of nominal line voltage.
4. Electrical power for the Agilent Ultivo LC/TQ may be delivered in either single-phase or 208-Wye configuration:

Configuration	Measurement	Nominal Voltage
Single Phase	Line to neutral	200, 208, 220, 230 or 240 VAC
	Line to ground	200, 208, 220, 230 or 240 VAC
	Ground to neutral	< 0.5 V rms
208-Wye	Line to line (phase A to phase B)	208, 220 VAC
	Line to ground (phase A to ground)	120, 127 VAC
	Line to ground (phase B to ground)	120, 127 VAC

Instrument Model	Line Voltage & Frequency (V, Hz)	Supply Circuit Rating (A)	Maximum Power Consumption (VA)
Agilent Ultivo LC/TQ	200 - 240 VAC @ 50/60 Hz	15 A	2700

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Nitrogen Gas Supply Requirement

Special Notes

1. For information on Agilent consumables, accessories and laboratory operating supplies, please visit <http://www.agilent.com/en-us/products/lab-supplies/chromatography-spectroscopy>
2. Impurities from LN2 Dewar being oxygen only
3. "Hydrocarbon free" means < 0.1 PPM hydrocarbons with the remaining gas being oxygen and trace argon.
4. Nitrogen Pressure as measured at the LC/TQ inlet (not the supply side).
5. Minimum Nitrogen Flow required at all times to prevent air from entering the instrument.
6. Main Nitrogen Supply fittings are 1/4" Swagelok.

Model	Nitrogen Source	Nitrogen Purity	Pressure	Flow
Agilent Ultivo LC/TQ	LN2 Dewar	≥ 99.5% and hydrocarbon free	5.5 - 6.8 bar (80 - 100 PSI)	≤ 30 L/min Maximum
	Nitrogen Generator	≥ 95.0% and hydrocarbon free		(≤ 1800 L/hour) > 3 L/min Minimum



Exhaust Venting

The LC/MS generates exhaust fumes from the foreline pump(s) and drain bottle (from the spray chamber) that must be properly vented for supported instrument operation and compliance with laboratory safety requirements.

Special Notes

1. Exhaust must be vented according to local Environmental Health and Safety regulations.
2. Exhaust gases contain traces of solvent, sample and hydrocarbon pump fluid.
3. Venting Rate is commensurate with Nitrogen consumption rate.
4. Two independent, negative pressure vents must be available with one for each of the exhaust sources: foreline pump(s) and Spray Chamber. If only 1 vent is available, the exhaust line(s)

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from the foreline pump(s) required must extend beyond the exhaust line from the spray chamber.

5. If a negative pressure vent is not available, the length of the tubing from the foreline pump(s) and the drain bottle to the vent should each not exceed 460 cm (15 ft).
6. Exhaust tubing is 1/2" interior diameter (I.D.).

Instrument Model	Combined Exhaust Venting Rate (Continuous)
Agilent Ultivo LC/TQ	≤ 30 L/min Maximum (≤ 1800 L/hour) > 3 L/min Minimum



Recommended Configurations

Agilent recommends 2 standard stacking configurations for your new system depending on the number and type of included modules. Please consider:

1. Equipment positioning on the bench,
2. Waste liquid & gas management
3. Special safety precautions to be taken



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Figure 1
Single LC/TQ stack configuration

Figure 2
Double LC/TQ stack configuration

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.chem.agilent.com/en-US/Training-Events/Pages/default.aspx>
- Need technical support, FAQs? – <http://www.chem.agilent.com/en-US/Technical-Support/Pages/default.aspx>
- Need supplies? – <http://www.chem.agilent.com/en-US/Products-Services/Parts-Supplies/Pages/default.aspx>

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