

Agilent CrossLab Start Up Services

Agilent InfinityLab Preparative HPLC System Site Preparation Checklist

Thank you for purchasing an instrument from **Agilent Technologies**. CrossLab Start Up is focused on helping customers shorten the time it takes to start realizing the full value of their instrument investment.

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, space, and utility requirements for the system set up in your lab.

Introduction

Customer Information

- If you have questions or problems in providing anything described as part of Customer Responsibilities below, 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.
- Should your site not be ready for whatever reasons, please contact Agilent as soon as possible to re-schedule any services that have been purchased.
- 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.
- Please refer to the other peripheral products (ie, samplers etc.) for site preparation requirements.
- If applicable, the Network Assessment Tool can be used to verify the network environment.

Customer Responsibilities

Ensure that 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 required **environmental conditions for the lab** as well as laboratory gases, tubing.
- The **power requirements** related to the product (e.g. **number & location** of electrical outlets).
- The **required operating supplies** necessary for the product and installation.
- While Agilent is delivering **Installation and Introduction** services, users of the instrument should be present throughout these services; otherwise, they will miss important operational, maintenance and safety information.
- Please consult the **Special Requirements and Other Considerations** section below for other product-specific information.
- HPLC grade (or better) solvents needed for installation (acetonitrile, isopropanol, and water).
- If an MSD is part of the installation, please refer to its specific Site Preparation Checklist for details.

Important Customer Web Links

- To access Agilent training and education, visit <https://www.agilent.com/chem/training> to learn about training options, which include online, classroom and onsite delivery. A training specialist can work directly with you to help determine your best options.
- To access the **Agilent Resource Center** web page, visit <https://www.agilent.com/en-us/agilentresources>.

The following information topics are available:

- Sample Prep and Containment
- Chemical Standards
- Analysis
- Service and Support
- Application Workflows
- The **Agilent Community** is an excellent place to get answers, collaborate with others about applications and Agilent products, and find in-depth documents and videos relevant to Agilent technologies. Visit <https://community.agilent.com/welcome>.
- Videos about specific preparation requirements for your instrument can be found by searching the **Agilent YouTube** channel at <https://www.youtube.com/user/agilent>.
- **Need to place a service call?**
<https://www.agilent.com/en/promotions/flexible-repair-options>

Site Preparation

Module List

Module identification: The module identifier (e.g. G7117A) can be found on the lower right side of the module front cover.

Table 1: Module List

Module	Instrument Description
G1328D	Preparative Manual Injector
G1364E	1260 Preparative Fraction Collector
G61xxA/B	6100 Series Single Quadrupole Mass Spectral Detector
G7114A/B	1260/1290 Variable Wavelength Detector
G7115A	1260 Diode Array Detector
G7157A	1260 Preparative Autosampler
G7167-60201	InfinityLab Sample Thermostat
G7158B	1290 Preparative Open-Bed Sampler/Collector
G7159B	1290 HiP Preparative Open-Bed Fraction Collector
G7161A/B	1260/1290 Preparative Binary Pump
G7163B	1290 Preparative Column Compartment
G7165A	1260 Multiple Wavelength Detector
G7166A	1260 Preparative Valve-based Fraction Collector
G7170B	1290 MS Flow Modulator
G9322A	1260 Clustering Valve
G9324A	1260 Delay Coil Organizer
G9328A	1260 Preparative Column Organizer
PCG93LLSTAND123	Mobile Packing Station
L&L 4001	Column Assembly, 1 inch
L&L 4002	Column Assembly, 2 inch
L&L 4003	Column Assembly, 3 inch

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

- The system needs an additional 2.5 cm (1.0 inches) of space on either side and approximately 8 cm (3.1 inches) in the rear for air circulation and electric connections.
- The autosampler module especially with a sample cooler installed should be operated in a proper horizontal position. Use a bubble level to check the leveling of the sampler.
- At least 2 people must be present to lift the MSD, foreline pump, preparative pump, open-bed sampler/collector.
- All instruments must be placed on a flat sturdy surface free of significant vibration.
- Avoid placing the instrument in locations with extreme temperature and humidity changes such as direct sunlight, near an open window, or beneath an air conditioning vent.

The following table provides dimensions and weight requirements.

Instrument Description	Weight		Height		Width		Depth	
	kg	lbs	mm	in	mm	in	mm	in
1260 Preparative Column Organizer	3.6	8	486	19.1	180	7.1	345	13
1260/1290 Preparative Binary Pump	27.0	59.5	324	12.6	396	15.6	436	17.2
Preparative Manual Injector	0.1	0.2	80	3.1	40	1.6	115	4.5
1260 Preparative Auto Sampler	16.2	35.7	324	12.6	396	15.6	436	17.2
1290 Preparative Open-Bed Sampler/Collector	30.6	67.5	781	30.7	393	15.5	622	24.5
1260/1290 Variable Wavelength Detector	11	24.3	140	5.5	396	15.6	436	17.2
1260 Multi Wavelength Detector	12	26.5	140	5.5	396	15.6	436	17.2

Instrument Description	Weight		Height		Width		Depth	
	kg	lbs	mm	in	mm	in	mm	in
1260 Diode Array Detector	12	26.5	140	5.5	396	15.6	436	17.2
6100 Series Single Quadrupole Mass Spectral Detector	Please refer to the specific Site Preparation Checklist for details.							
1290 MS Flow Modulator	1.9	4.2	95	3.7	95	3.7	300	11.8
1260 Preparative Valve based Fraction Collector	1.9	4.2	95	3.7	95	3.7	300	11.8
1260 Preparative Fraction Collector	17	37.4	180	7	345	13.5	435	17
1290 HiP Preparative Open-Bed Fraction Collector	13.5	29.8	781	30.8	396	15.6	625	24.6
1260 Delay Coil Organizer	0.6	1.3	95	3.7	95	3.7	338	13.3
1290 Preparative Column Compartment	22.7	50	640	25.2	396	15.6	436	17.2
1260 Clustering Valve	0.6	1.3	95	3.7	95	3.7	150	33.1
Mobile Packing Station	62	136	1000	39	600	24	420	17
Column Assembly, 1 inch, L&L4001	9.5	21	920	36	360	14	360	14
Column Assembly, 2 inch, L&L4002	20	45	1000	39	360	14	360	14
Column Assembly, 3 inch, L&L4003	37	81	920	36	410	16	410	16

Environmental Conditions

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

Special Notes

- Performance can be affected by sources of heat & cold, e.g. direct sunlight, heating/cooling from air conditioning outlets, drafts and/or vibrations.
- The bench or supporting surface must be vibration free.
- The laboratory's ambient temperature conditions must be stable for optimum performance.

The following table may help you calculate the additional BTUs of heat dissipation from this new equipment. Maximums represent the heat given off when heated zones are set for maximum temperatures.

Product Number	Instrument Description	Operating Temperature Range °C (°F)	Operating Humidity Range %
G9328A	1260 Preparative Column Organizer	n/a	n/a
G7161A/B	1260/1290 Preparative Binary Pump	4 - 40 °C (39 - 104 °F)	< 95 % r.h. at 40 °C (104 °F), non-condensing
G1328D	Preparative Manual Injector	n/a	n/a
G7157A	1260 Preparative AutoSampler	4 - 40 °C (39 - 104 °F), without chiller up to 55 °C (131 °F)	< 95 % r.h. at 40 °C (104 °F), non-condensing ¹
G7158B	1290 Preparative Open-Bed Sampler/Collector	4 - 40 °C (39 - 104 °F)	Operating humidity range: ≤ 80 % r.h. up to 31 °C, decreasing to 50 % r.h. at 40 °C (104 °F)
G7114A/B	1260/90 Variable Wavelength Detector	4 - 55 °C (39 - 131 °F), constant temperature	< 95 % r.h. at 40 °C (104 °F), non-condensing
G7165A	1260 Multi Wavelength Detector	4 - 55 °C (39 - 131 °F), constant temperature	< 95 % r.h. at 40 °C (104 °F), non-condensing
G7115A	1260 Diode Array Detector	4 - 55 °C (39 - 131 °F), constant temperature	< 95 % r.h. at 40 °C (104 °F), non-condensing
G61xxA/B	6100 Series SQ Mass Spectral Detector	Please refer to the specific Site Preparation Checklist for details.	
G7170B	1290 MS Flow Modulator	4 - 40 °C (39 - 104 °F)	< 95 %

Product Number	Instrument Description	Operating Temperature Range °C (°F)	Operating Humidity Range %
G7166A	1260 Preparative Valve-based Fraction Collector	4 - 40 °C (39 - 104 °F)	< 95 %
G1364E	1260 Preparative Fraction Collector	4 - 40 °C (39 - 104 °F)	< 95 % r.h. at 40 °C (104 °F), non-condensing
G7159B	1290 HiP Preparative OpenBed Fraction Collector	4 - 40 °C (39 - 104 °F)	< 95 %
G9324A	1260 Delay Coil Organizer	n/a	n/a
G9322A	1260 Clustering Valve	4 - 40 °C (39 - 104 °F)	< 95 %
G7163B	1290 Preparative Column Compartment	n/a	n/a
PCG93LLST AN D123	Mobile Packing Station	15 - 30 °C (59 - 86 °F)	20 - 80 % r.h.
L&L4001 L&L4002 L&L4003	Column Assembly, 1 inch Column Assembly, 2 inch Column Assembly, 3 inch	15 - 30 °C (59 - 86 °F)	20 - 80 % r.h.

¹ If a sample cooler is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non-condensing operation.

Exhaust Venting Requirements

General Laboratory Ventilation Conditions

The recommended air exchange rate is 10 times per hour, the minimum required air exchange rate is 8 times per hour.

Recommendations for fume hood installations: The recommended ventilation speed is 200 m³/h with closed sash window and 490 m³/h with open sash window.

Power Consumption

Special Notes

- If a computer system is supplied with your instrument, be sure to account for those electrical outlets.
- The heat dissipation can be calculated from the active power, using the following equation:
1 W = 3.413 BTU/h
- Avoid using power supplies from a source that may be subject to electrical interference from other services (such as large electric motors, elevators, welders and air conditioning units).
- Only single phase power is required.

Product Number	Instrument Description	Line Voltage and Frequency V, Hz	Maximum Power Consumption VA	Maximum Power Consumption W
G9328A	1260 Preparative Column Organizer	n/a	n/a	n/a
G7161A/B	1260/1290 Preparative Binary Pump	100 – 240 V (±10 %), 50 – 60 Hz (±5 %)	80	65
G1328D	Preparative Manual Injector	n/a	n/a	n/a
G7157A	1260 Preparative AutoSampler	100 – 240 V (±10 %), 50 – 60 Hz (±5 %)	350	350
G7158B	1290 Preparative Open-Bed Sampler/Collector	100 – 240 V (±10 %), 50 – 60 Hz (±5 %)	350	350
G7114A/B	1260/90 Variable Wavelength Detector	100 – 240 V (±10 %), 50 – 60 Hz (±5 %)	80	70
G7165A	1260 Multi Wavelength Detector	100 – 240 V (±10 %), 50 – 60 Hz (±5 %)	110	100
G7115A	1260 Diode Array Detector	100 – 240 V (±10 %), 50 – 60 Hz (±5 %)	110	100
G61xxA/B	G6100B Series Single Quad	Please refer to the specific Site Preparation Checklist for details.		
G7170B	1290 MS Flow Modulator	100 – 240 V (±10 %), 50 – 60 Hz (±5 %)	20	7
G7166A	1260 Preparative Valve-based Fraction Collector	100 – 240 V (±10 %), 50 – 60 Hz (±5 %)	20	7

Product Number	Instrument Description	Line Voltage and Frequency V, Hz	Maximum Power Consumption VA	Maximum Power Consumption W
G1364E	1260 Preparative Fraction Collector	100 – 240 V ($\pm 10\%$), 50 – 60 Hz ($\pm 5\%$)	200	170
G7159B	1290 HiP Preparative OpenBed Fraction Collector	100 – 240 V ($\pm 10\%$), 50 – 60 Hz ($\pm 5\%$)	180	180
G9324A	1260 Delay Coil Organizer	n/a	n/a	n/a
G9322A	1260 Clustering Valve	n/a	n/a	n/a
G7163B	1290 Preparative Column Compartment	n/a	n/a	n/a

Required Operating Supplies by Customer for Installation

Special notes

- For information on Agilent consumables, accessories, and laboratory operating supplies, please visit: <https://www.agilent.com/en-us/products/lab-supplies>

Special Requirements and Other Considerations

Wiring Requirements

All modules communicate via CAN through a LAN connection with the PC. Some modules such as the Fraction Valve, require a host-module, since they do not use their own CPU.

Waste Requirements

Operation of the Agilent Preparative HPLC System requires the use of a waste container for the disposal of excess fluids. Suitable tubing is supplied with the HPLC system for use with most solvents.

A chemically inert container, which is appropriately sized to hold waste coming from the system must be provided by the system user. It should be located underneath the workbench where it is protected by the bench and in full view of the operator.

Leak Concept and Requirements

The waste line cascading as suggested for Analytical HPLC Systems is not allowed for Preparative HPLC Systems. For Preparative HPLC Systems following rules apply:

- Leak and waste lines cannot be combined and must be attached to waste container by individual ports.
- No up-slopes or bends of the leak and waste lines are allowed. Use L-connection pieces for the table or other edges.
- Customer provides waste container and suitable waste container cap with sufficient number of inlet ports. Following criteria apply:
 - One leak line per stack tower is installed
 - One leak line per solvent cabinet
 - One waste line for G7161B seal wash
 - One waste line for G7157A needle wash
 - One leak line and one waste line per G7158B/G7159B
- Each G7158B/G7159B requires its own waste container.

If the system is placed in a fume hood or on a table with table edge, the modules/stacks need to be raised to ensure proper leak handling:

- One base plate is required for tables with table edge lower than 15 mm.

- Two base plates are required for tables with table edge higher than 15 mm and lower than 30 mm.

Network Requirements

The Agilent Preparative HPLC System requires an Ethernet connection to the PC via a shielded twisted pair Ethernet crossover cable Category 5 or better usually connected to the Detector.

If connection is required to an Ethernet network, then a shielded twisted pair Ethernet non-crossover cable Category 5 or better will be required.

Most PC's come pre-configured with an Ethernet connection either built into the motherboard or with an Ethernet network card installed. Check that the intended PC has this configuration and if not, a network card will have to be fitted. Refer to the installation chapter for details.

If the users are supplying their own PC, they are responsible for installing and configuring the card. They are also responsible for setting up and maintaining any LAN configuration where a detector may be used.

All network issues are to be dealt with by the users.

Solvent Requirements

Customer should have available HPLC grade acetonitrile and water. In case of a Mass Based Purification system, LCMS grade solvents are required.

- Packing material (solid phase)
- HPLC grade water or de-ionized water
- HPLC grade isopropanol
- HPLC grade acetone
- HPLC grade methanol

Gas Requirements

Special Notes

For MSD gas requirements, please refer to the specific Site Preparation Checklist for details.

A minimum of 80 psi of dry filtered compressed air or nitrogen is required for the hydraulics of the Mobile Packing Station.

The Agilent G7166A Fraction Collector requires a supply gas (either Nitrogen or Compressed Air) to empty its individual valves and fraction lines. The gas supply needs to be free of oil, humidity and particles. The maximum gas pressure is 7 bar (100 psi) and must be set by an external pressure regulator. The Push Fit gas inlet of the Fraction Collector allows a supplied 2 m x 6 mm (0.236 inches) PU hose to be inserted. The accessory kit is supplied with a 6 mm Male R1/4 BSPT to Push Fit Elbow fitting, that is to be fitted into the external pressure regulator. It is the customer's responsibility to provide a suitable adaptor between this elbow fitting and the regulator. Sizes can be found in the following table. Alternatively, the customer can provide their own fittings to connect a 6 mm PU tube to their regulator.

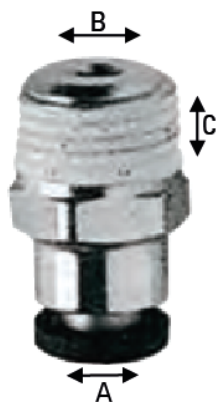


Table 2: Push Fit Fitting

Measurement point	Size
A	6 mm
B	1/4 BSPT
C	8 mm
Wrench size	12 mm

Service Engineer Review (Optional)

Service Engineer Comments

If the Service Engineer completed a review of the Site Preparation requirements with the customer, the Service Engineer should complete the following Comments section.

If there are any specific points that should be noted as part of performing the site preparation review or other items of interest for the customer, please write in this box.

Site Preparation Verification

Service Request Number:

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Date of Service Completion:

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Service Engineer Name:

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Customer Name:

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Service Engineer Signature:

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