Agilent CrossLab
From Insight to Outcome

Agilent CrossLab Start Up Services

Agilent InfinityLab Online LC Solutions
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.

Revision: D.00, Issued: 12-Dec-2024
Document Number: D0006634
© Agilent Technologies, Inc. 2017-2024

Agilent

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.

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).
- The third-party equipment for sample delivery is available and prepared to use for installation if necessary. The requirements (electrical connection and capillary connection) for the sample delivery equipment are listed in the Special Requirements Section.
- OpenLab CDS v2.6, or higher, Workstation, or Workstation Plus is installed.

© Agilent Technologies, Inc. 2017-2024

- The **computing environment** and the necessary space is made available.
- The number and location of **electrical outlets** for your computer systems and peripherals are planned.
- Your site meets the **software, hardware, and networking specifications** described later in this document.
- Locate your **sales order information**, software authorization codes, and/or software licenses/certificates.
- Check for Hotfix, Microsoft updates, and patch compatibility appropriate for the customer's system.

NOTE **Current Microsoft updates and Windows version must be installed in the customer provided PC before installation can begin.**

- The necessary **software media**, disks etc. are available including upgrade/update disks.
- The required free disk space is available.

NOTE At least 5 GB free disk space is required to use the Online LC Monitoring Services without problems. If the free disk space falls beneath this threshold, the message bus (RabbitMQ) will stop sending messages to prevent a potential service crash. This precaution will impair the function of the system.

- That a suitable **backup solution** is identified for your software.
- Availability of a **system/network administrator** as needed to connect to your intranet.

© Agilent Technologies, Inc. 2017-2024

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

© Agilent Technologies, Inc. 2017-2024

Site Preparation

Hardware

Module List

Module identification: The module identifier (e.g. G3167A) can be found on the lower right side of the module front cover.

The information in this document applies to Infinity II and Infinity III modules.

Module	Instrument Description
G3167A	1260 Online Sample Manager
G3167B	1290 Bio Online Sample Manager
G1170A	1290 Valve Drive and External Valve Head

© Agilent Technologies, Inc. 2017-2024

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 following table provides dimensions and weight requirements.

- For general guidance, consult the section "Dimensions and Weight" in Agilent InfinityLab LC Series Site Preparation Checklist.
- This product requires additional lifting assistance in order to be located in your lab due to its weight. Please discuss the arrangements for this activity with the service engineer **prior to installation**.

Instrument Description	Weight		Height		Width		Depth	
	kg	lbs	mm	in	mm	in	mm	in
G3167A/B	22 [1]	48.5 [1]	320	12.6	396	15.6	468	18.4
G1170A	1.9 [2]	4.3 [2]	90	3.54	90	3.54	300	11.8

[1] Without Sample Thermostat

[2] Without Sampling Valve Head

Equipment Positioning on the Bench

The optimal stack configuration may vary. For details, see the documentation of the system in use. General recommendations for the 1260 Prime Online LC System and the 1290 Bio Online LC System:

- Using the InfinityLab Flex Bench is recommended for highest flexibility.
- Stack the 1260 Online Sample Manager/1290 Bio Online Sample Manager at the same position as recommended for other autosamplers.
- Arrange the 1260 Online Sample Manager/1290 Bio Online Sample Manager aligned to the other modules.
- Consider extra 9.5 cm (3.7 in) on the right side of the LC stack to mount the 1290 Valve Drive on the 1260 Online Sample Manager/1290 Bio Online Sample Manager module.

© Agilent Technologies, Inc. 2017-2024

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 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.

Instrument Description	Operating Temperature Range °C (°F)	Operating Humidity Range %
G3167A/B	4 - 40 °C (39 - 104 °F), constant temperature	< 95 % r.h. at 40 °C (104 °F), [1] noncondensing
G1170A	4 - 55 °C (39 - 131 °F)	< 95 % r.h. at 25 - 40 °C (77 - 104 °F), noncondensing

[1] If a thermostat is installed, the upper humidity limit should be reduced. Please check your lab conditions to stay beyond dew point values for noncondensing operation.

© Agilent Technologies, Inc. 2017-2024

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

Instrument Description	Line Voltage and Frequency V, Hz	Maximum Power Consumption VA	Maximum Power Consumption W
G3167A/B	100 - 240 VAC (±10 %), 50 or 60 Hz (±5 %)	180 VA [1]	180 W
G1170A	100 - 240 VAC (±10 %), 50 or 60 Hz (±5 %)	20 VA	4 W

[1] Maximum power consumption corresponds to a sampler with the Sample Thermostat installed.

- Use the correct power cord.

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
- Agilent is not responsible for the provision and installation of the customer's sample delivery equipment for the Online LC Solution. If assistance and consultations are required for this activity, extra time for the installation should be discussed and scheduled in advance.

In the following table, please provide the details of the sampling equipment going to be installed and used with the Agilent Online LC Solution, if applicable.

Item Description (including Dimensions etc.)	Vendor's Part Number (if applicable)	Quantity

© Agilent Technologies, Inc. 2017-2024

Special Requirements and Other Considerations

Waste Liquid Management

- Mount the provided safe leak and waste handling adapter on the 1260 Online Sample Manager/1290 Bio Online Sample Manager.
- Mount the provided safe leak and waste handling accessories for the External Valve Drive.

NOTE Consider special precautions for leak and waste handling measures if hazardous or toxic samples are collected by the Online Sample Manager.

NOTE If the Online Sample Manager is equipped with the Sample Thermostat, a separate waste container is required for the condensate.

Solvent Requirements

HPLC grade (or better) solvents are needed for installation (acetonitrile, isopropanol, and water) with a dry residue below 1 ppm.

© Agilent Technologies, Inc. 2017-2024

Stack Configurations

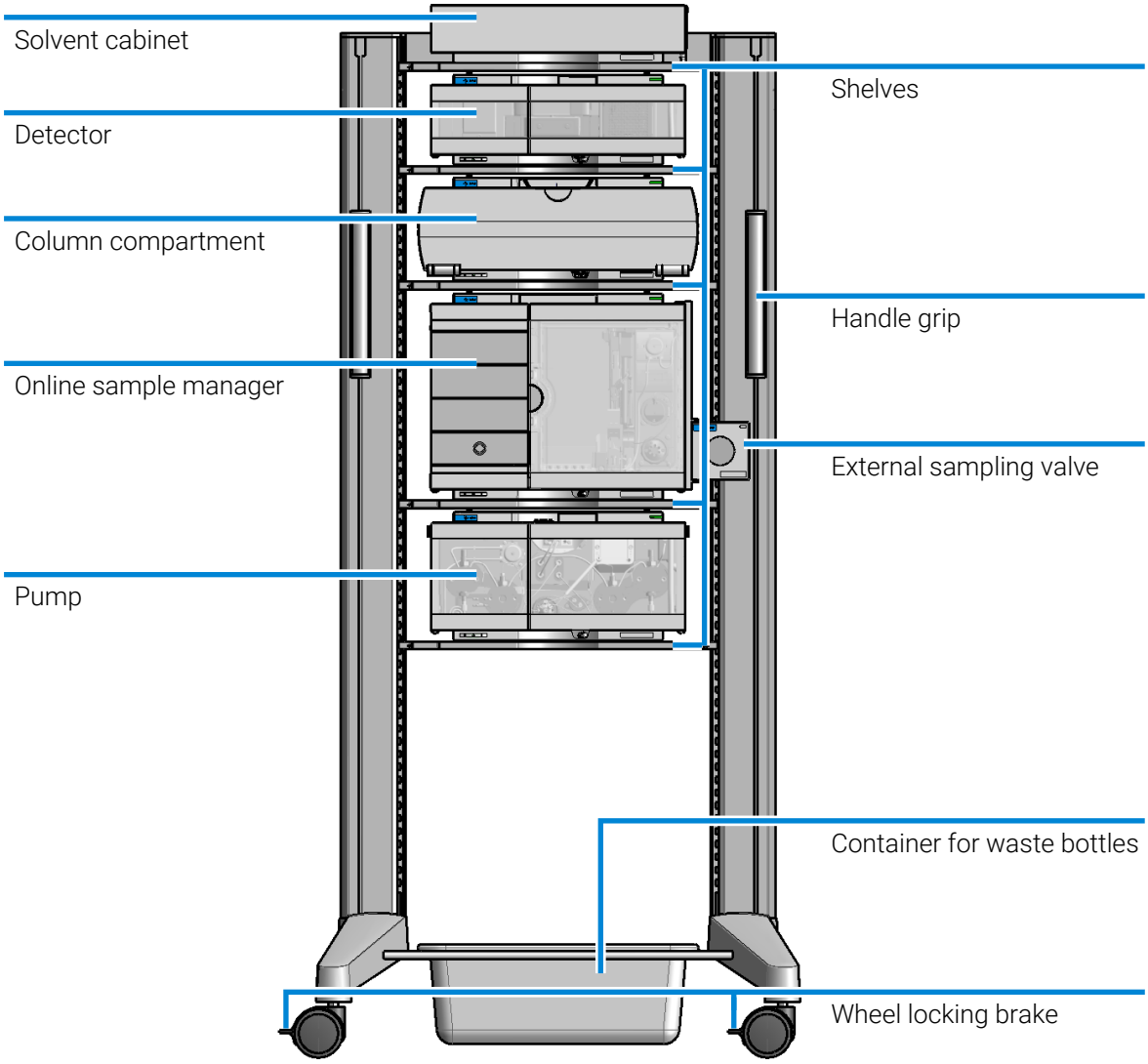

Figure 1: Online LC System (Flex Bench)

© Agilent Technologies, Inc. 2017-2024

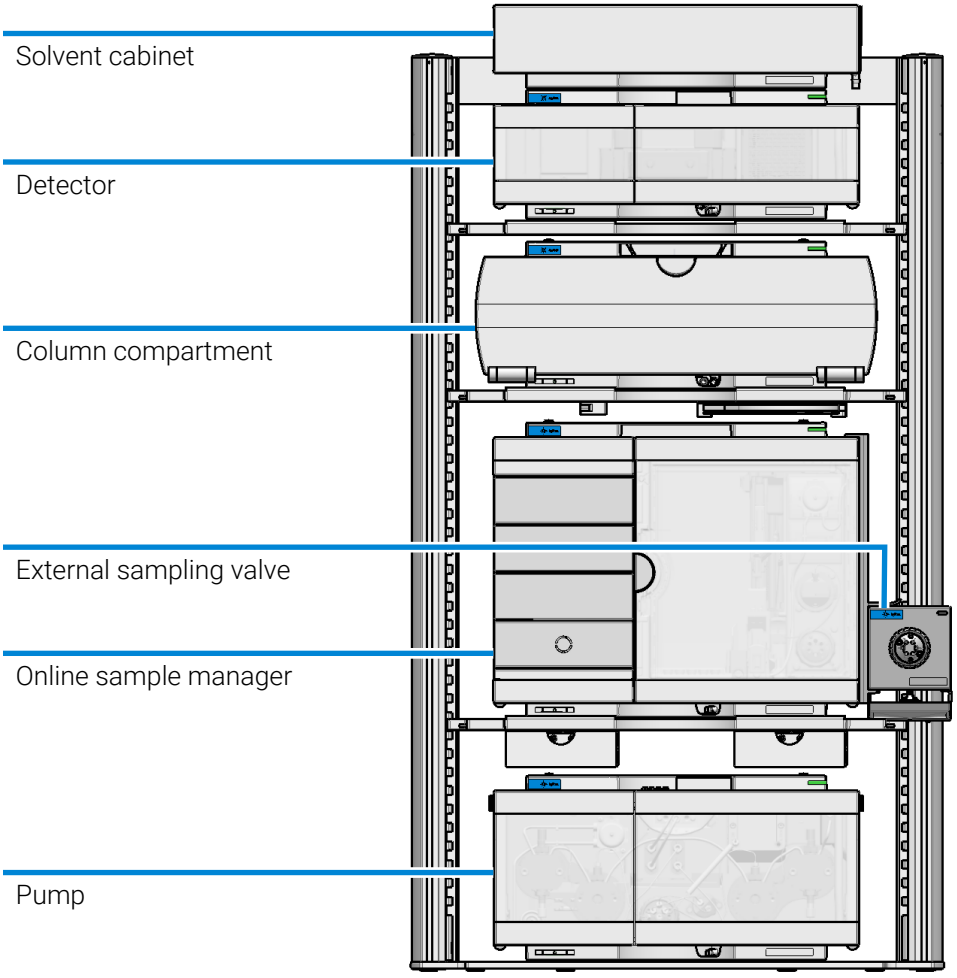

Figure 2: Online LC System (Benchtop)

© Agilent Technologies, Inc. 2017-2024

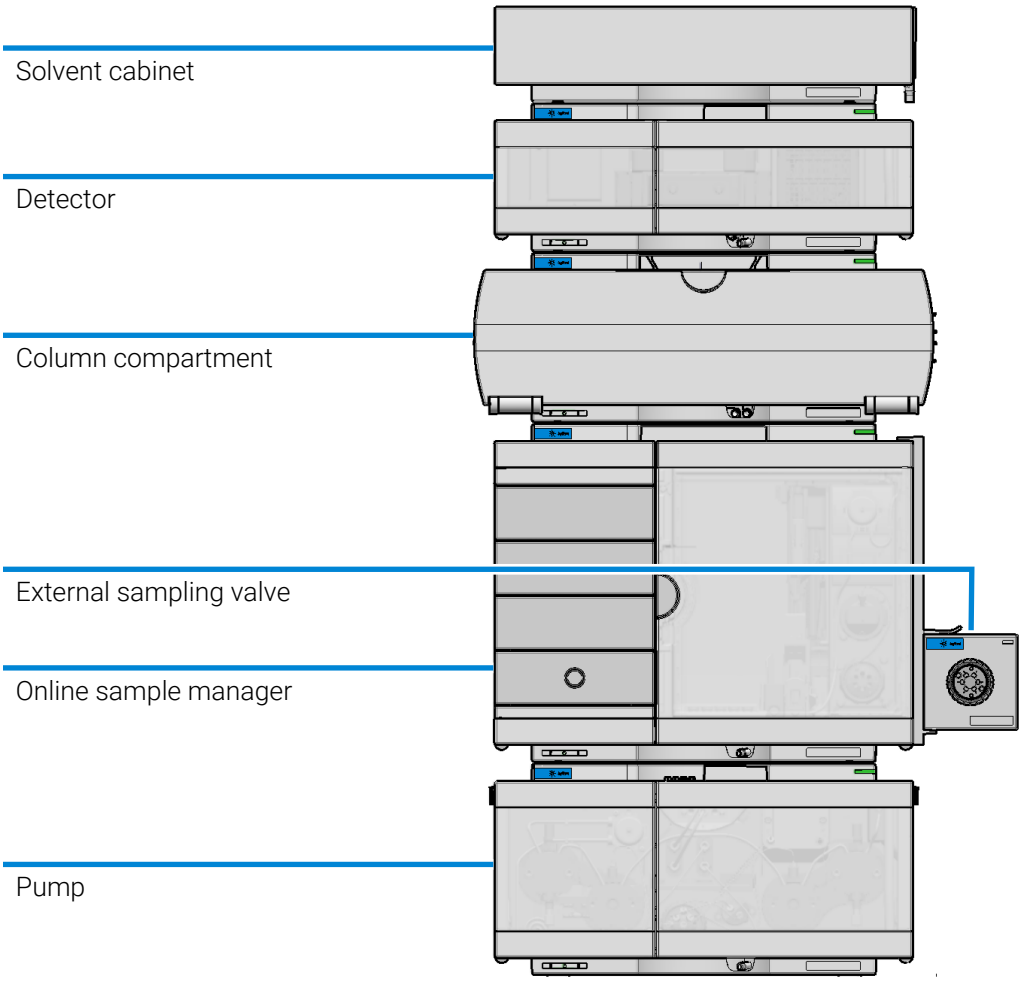

Figure 3: One Stack Online LC System Configuration

© Agilent Technologies, Inc. 2017-2024

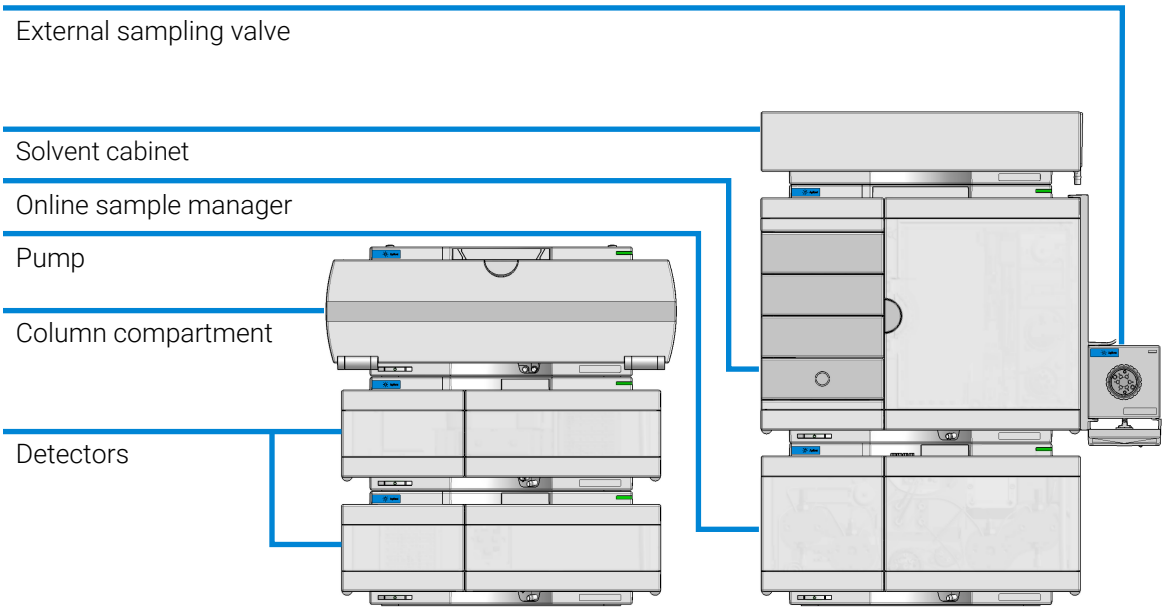

Figure 4: Two Stack Online LC System Configuration

G7167-60201 Sample Thermostat

If the 1260 Online Sample Manager/1290 Bio Online Sample Manager is equipped with the Sample Thermostat, isobutane (R600a) is used as refrigerant, which is environmentally friendly but flammable. Therefore, make special considerations for the safe operation of the device:

- Keep open fire or sources of ignition away from the device.
- Ensure a room size of 1 m^3 for every 8 g of R600a refrigerant inside the Sample Thermostat (total refrigerant loading is 30 g).
- Ensure adequate ventilation: typical air exchange of 25 m^3/h per m^2 of laboratory floor area.
- Do not use mechanical devices or other means to accelerate the defrosting process.
- Keep the ventilation openings on the housing clear of any obstruction or blockage.

© Agilent Technologies, Inc. 2017-2024

Sample Delivery Equipment Connection

If the customer uses own sample delivery equipment synchronized and integrated into the InfinityLab Online LC Solution setup, the following minimal requirements are needed:

☐ Electronic interface

Agilent equipment have an Enhanced Remote Interface (ERI) socket (female) on the backside of the modules. One of the following cables can be required as an extra (depending on compatibility with the customers sample delivery equipment):

- p/n 5188-8029: ERI to general purpose (D_Sub 15 pin male - Agilent side, open end wires - customer side).
- p/n 5188-8044: ERI to ERI (D_Sub 15 pin male - Agilent side, D_Sub 15 pin male - customer side).
  - p/n 5188-8059: ERI - Extension cable (1.2 m D_Sub 15 pin female - male), if necessary.
- p/n 5188-8045: ERI to APG (D_Sub 15 pin male - Agilent side, D_sub 9 pin male - customer side).

☐ Sample delivery lines

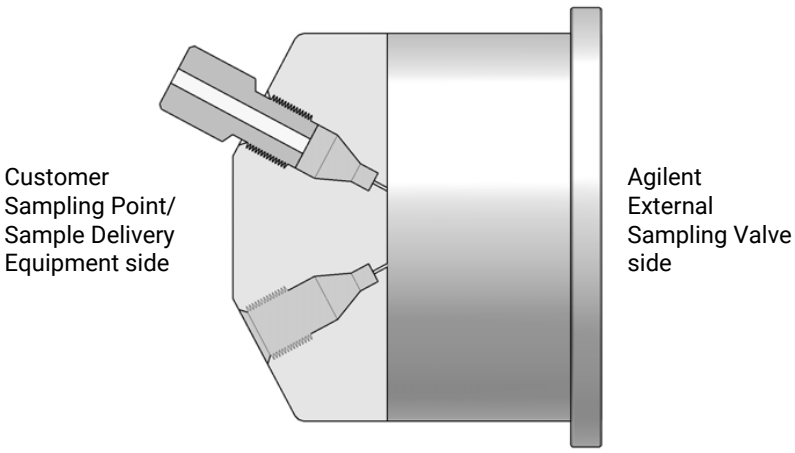

Figure 5: Example of Sample Line Connection in Valve Port (Cross section)

© Agilent Technologies, Inc. 2017-2024

Fittings:

- Type: Swagelok 1/16" OD:

Female on Agilent Sampling Valve.

Male on the external tubing/capillary from Sampling Point/Sample delivery Equipment.

Tubing/Capillaries:

- Material: nonconductive, selected by customer considering chemical resistance and compatibility with the collected sample.
- Inner diameter: 0.5 mm or above.
- Outside diameter: 1/16" (1.5875 mm).

Requirements for Sample to be collected online

Sampling stream property	Limit	Comment
Pressure	< 200 bar	
Flowrate	< 5mL/min	
Ignition Temperature	Min 200 °C	
Boiling Point (BP)	Min 56 °C	
Temperature	Max 20 °C below BP	
Viscosity	0.2 – 10 cP	
Particle size	< 0.22 µm	Without sedimentation
Solid residue	No	
Dissolved gases	No	
pH	1 – 12.5	Strong acid solution not below pH 2.3

Tools

Your Agilent instrument comes with a few basic tools and consumables which are relevant to the specific configuration of your system.

© Agilent Technologies, Inc. 2017-2024

Software

Software Licenses

Product	Description
G2954AA	Online LC Monitoring Software • Basic license to use the core functions of the software. • One activation key (1x) for Subscribenet is delivered with the Online Sample Manager Module.
G2955AA	Online LC Monitoring Software UI Client • Required for each Agilent Online LC Monitoring UI Instance. • Accumulative: The more licenses available per system, the more UI Clients can be run in parallel (especially dedicated for Distributed Systems). • One activation key (1x) for Subscribenet is delivered with the Online Sample Manager Module.
G2956AA	Online LC Monitoring Remote Control API • Required for Agilent Online Monitoring Remote Control Web API and method-based OPC UA API.
G2957AA	Plus Edition License • Required for activation of Online LC Monitoring Software Compliance features.
G2958AA	Online LC Monitoring OPC UA API • Required for activation of the subscription (push) based OPC UA Automation API. • For API Features following the OPC UA Framework; necessary for communication/automation of the Agilent Online LC Solution. • Capable for OPC based Remote Control (see G2956AA).

© Agilent Technologies, Inc. 2017-2024

Software Specifications for Workstations, Clients and Servers

Special notes

- The Online LC Monitoring Software - Workstation Topology - relies on an OpenLab CDS v2.6, or higher, Workstation, or Workstation Plus installation, depending on its use as standalone or distributed system.
- Therefore, minimal software specifications are applicable:

Software Specification Description	Minimum	Recommended (if applicable)	Comments
Operating system name, version	Windows 10, Enterprise or Professional, 64-bit		
O/S .NET and other add-ons	.NET 3.5 SP1 (must be enabled on Windows 10) and .NET 4.x (installed by OpenLab CDS v2.6 Installer)		
Language settings/ compatibility	English Western European Language (CDS will always appear in English) Chinese (Non-localized instrument drivers are supported and will always appear in English) Japanese (Non-localized instrument drivers are supported and will always appear in English) Brazilian Portuguese (Non-localized instrument drivers are supported and will always appear in English) Russian (Non-localized instrument drivers are supported and will always appear in English)		
Regional settings/ compatibility			
Account settings/privileges	Domain user with local administrator privilege required for installation and configuration		
Specific drivers			
Web browser	Internet Explorer 11 Google Chrome 40, or higher Microsoft Edge		
Antivirus Software	Symantec Endpoint Protection Trend Micro Microsoft Security Essentials McAfee		

© Agilent Technologies, Inc. 2017-2024

Computer Hardware Specifications for Workstations, Clients and Servers

Special notes

- At least 5 GB free disk space is required to use the Online LC Monitoring Services without problems. If the free disk space falls beneath this threshold, the message bus (RabbitMQ) will stop sending messages to prevent a potential service crash. This precaution will impair the function of the system.
- The Online LC Monitoring Software - Workstation Topology - relies on an OpenLab CDS v2.6, or higher, Workstation, or Workstation Plus installation, depending on its use as standalone or distributed system.
- Therefore, minimal hardware specifications are applicable:

Hardware Specification Description	Minimum	Recommended (if applicable)	Comments
Processor type and speed	Intel® i5, i7, or Xeon E3 or equivalent 3.0 GHz or greater 4 Core		
Memory	8 GB for 1-2 instruments of for up to 2 points configured. 16 GB for 4 instruments of 3 or more instrument points.	16 GB	
	Ensure that at least 4 GB is reserved for the Windows operating system. Ensure that at least 5 GB of free disk space is available for the Online LC Monitoring Services.		
Internal storage/peripherals/ media	1x 500 GB 7200 RPM SATA drive minimum or equivalent solid-state drive. SSD is recommended for better performance.	2x 500 GB or 1 TB 7200 RPM SATA drive minimum or equivalent solid-state drive. SSD is recommended for better performance. If the computer has a disc array controller Agilent recommends 2x 1 TB in RAID1.	
External storage/peripherals/ media			
Video peripherals	Graphic resolution: 1600 x 900 minimum 1920 x 1080 recommended		
Audio peripherals			

© Agilent Technologies, Inc. 2017-2024

Hardware Specification Description	Minimum	Recommended (if applicable)	Comments
Printing peripherals			
Pointing peripherals			
USB Port	USB 2 required for installation via provided media		

Network Specifications

Special notes

- The Online LC Monitoring Software - Workstation Topology - relies on an OpenLab CDS v2.6, or higher, Workstation, or Workstation Plus installation, depending on its use as standalone or distributed system.
- Therefore, minimal network specifications are applicable:

Network Specification Description	Minimum	Recommended (if applicable)	Comments
Network type, bandwidth, speed, protocol etc.	Internet Protocol Version 4 (TCP/IPv4) only		Internet Protocol Version 6 (TCP/IPv6) is not supported
Additional network or instrument communication card requirements	100 MB / 1 GB LAN for instrument control 2nd LAN card required for house, to isolate the instrument's data traffic from the lab intranet connection		
IP Address	Static or DHCP Reservation		

Special Requirements

- If the customer uses a Firewall other than the Windows Firewall, ensure that all required ports can be used by the Online LC Monitoring Software.
- To check for specific requirements for the OpenLab CDS v2.x Workstation, or Workstation Plus, see the corresponding site preparation checklist.

© Agilent Technologies, Inc. 2017-2024

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. Both the Service Engineer and the customer should complete the Site Verification section below.

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

© Agilent Technologies, Inc. 2017-2024

Site Preparation Verification

Service Request Number:	Date of Service Completion:
.....	.....
Service Engineer Name:	Customer Name:
.....	.....
Service Engineer Signature:	Total number of pages in this document:
.....	.....

Revision: D.00, Issued: 12-Dec-2024
Document Number: D0006634
© Agilent Technologies, Inc. 2017-2024