Agilent CrossLab
From Insight to Outcome

Agilent CrossLab Start Up Services

Agilent Gas Controller Site Preparation Checklist

Thank you for purchasing a Gas Controller 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.

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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 (e.g., 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 and 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 Gas Controller 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.

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Important Customer Web Links

- To access Agilent training and education, visit http://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?** Flexible Repair Options | Agilent

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Site Preparation

The customer is responsible for procuring and installing the high-pressure components of the gas-supply system. These include medical-grade gas tanks and regulators. The gas flowmeters may be ordered from Agilent and can be installed by the Field Service Engineer. Ensure that the installed equipment conforms to all local and national safety regulations regarding the installation and use of compressed gases.

For the CO_2 only Gas Controller:

- Pressurized Medical Grade CO_2 gas tank with appropriate regulator.

For the Dual Gas Controller:

- Pressurized Medical Grade CO_2 gas tank with appropriate regulator.
- Pressurized Medical Grade N_2 gas tank with appropriate regulator.

Tanks

- All customers must procure, install, and properly secure their own gas tanks.
- Agilent does not sell gas tanks.

Gas-Tank Regulators

- All customers must procure and install their own gas tank regulator(s).
- Agilent sells regulators for customers in the United States using CGA-compliant connectors. Please see part numbers in the table below.
- Ensure that regulators for gas tanks are specified to exceed the maximum outlet pressure for the gas tanks to be used.
- Do not force connections to the gas tanks, and make sure the regulator used is the correct type for your specific gas tank.

Gas Flow Meters

- Flow Meters may be ordered from Agilent and installed by the Field Service Engineer. Please see part numbers in the table below.

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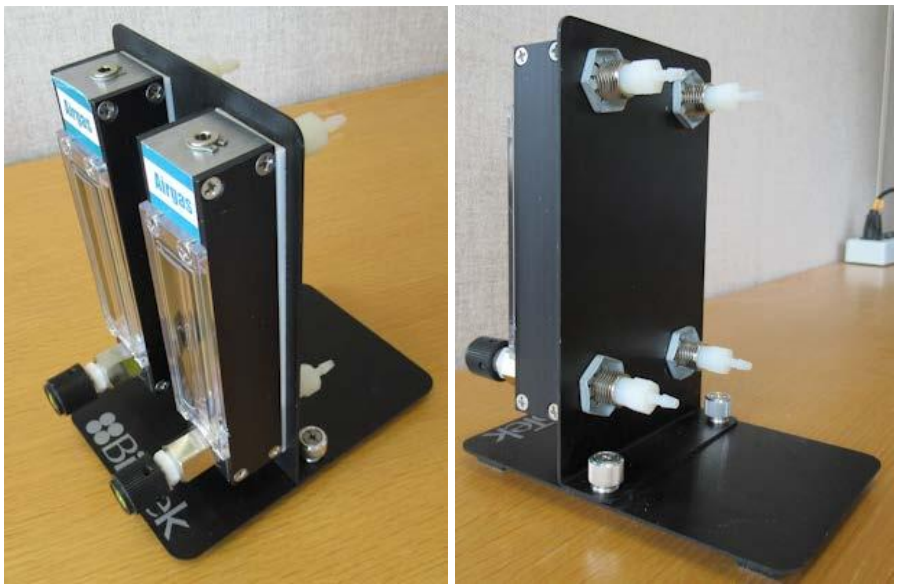
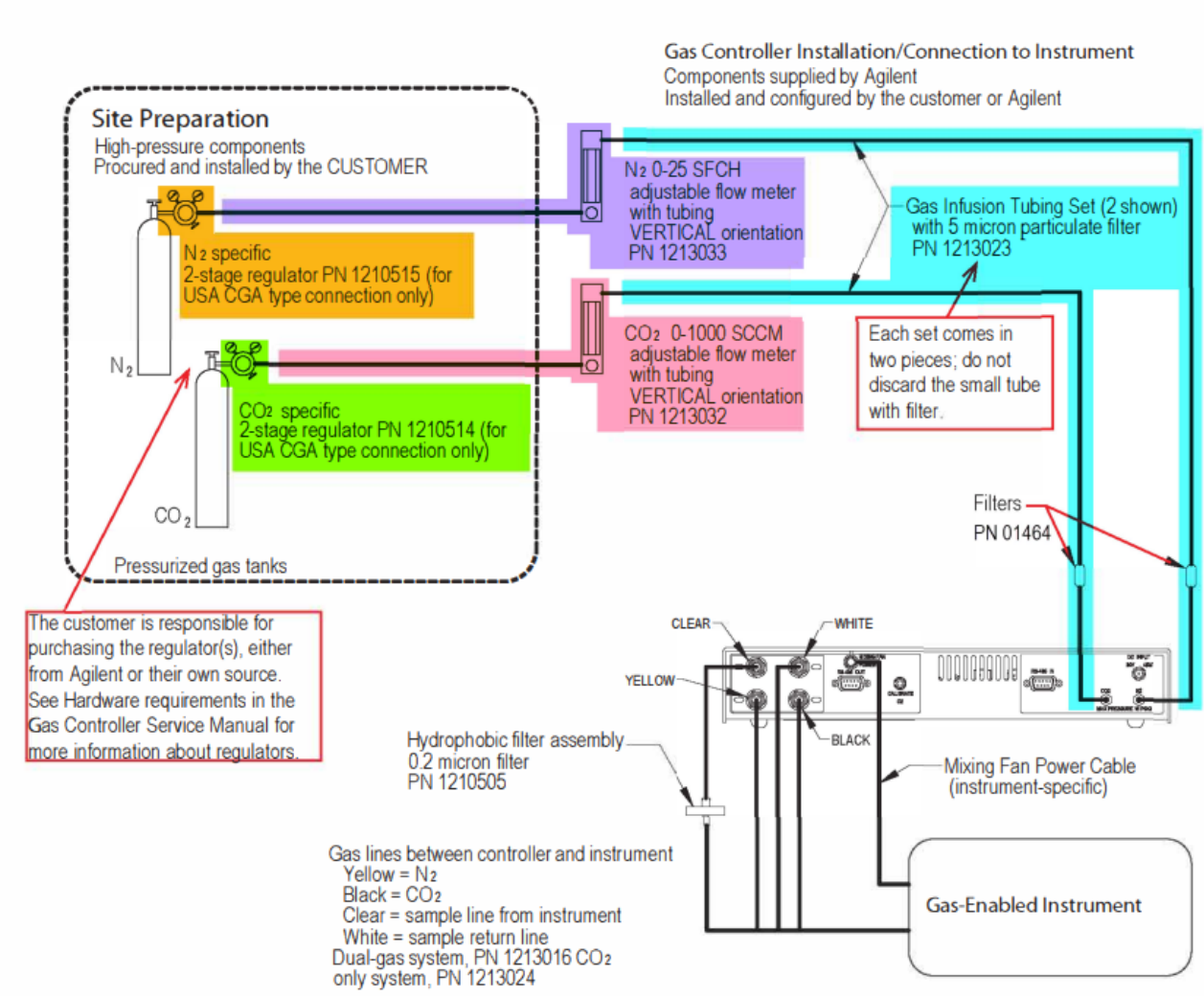
Regulator and Flow Meter Specifications

Description	Specifications	For U.S. Customers Only
CO_2 Regulator	• Two-stage regulator • Stainless-steel diaphragm • Adjustable output, 0-30 psi • Outlet connection, barbed for 1/8” tubing	Agilent sells regulators for customers in the United States using CGA-compliant connectors. • CO2 Regulator, PN 1210514, CGA320 • N2 Regulator, PN 1210515, CGA580 Regulators come equipped with an 1/8” tubing adapter installed (PN 01757).
N_2 Regulator	• Two-stage regulator • Stainless-steel diaphragm • Adjustable output, 0-30 psi • Outlet connection, barbed for 1/8” tubing	
CO_2 Flow Meter	• Adjustable Flow Meter, 0 – 25 SFCH	PN 1213032 (includes tubing). Flowmeter stand PN 1410540 also available. Two flowmeters can be mounted to a single stand.
N_2 Flow Meter	• Adjustable Flow Meter, 0 – 1000 SCCM	PN 1213033 (includes tubing). Flowmeter stand PN 1410540 also available. Two flowmeters can be mounted to a single stand.



PN 1410540 Flowmeter Stand



Installation of high and low-pressure components

Dimensions and Weight

Identify the laboratory bench space before your Gas Controller 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.

Instrument Description	Weight		Height		Depth		Width	
	Kg	lbs.	cm	in	cm	in	cm	in
Gas Controller	2.0	4.3	6.6	2.6	22.9	9.0	34.3	13.5
Flowmeter Stand	0.6	1.2	17.0	6.7	15.3	6.0	10.2	4.0

Equipment Positioning on the Bench

- The Gas Controller needs to be installed on a level surface. The flowmeters must be installed in an upright position. If using the flowmeter stand, the stand must be installed on a level surface.

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 and 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 %
Gas Controller	18˚C to 40˚ (64˚F to 104˚F)	10% to 80% relative humidity

Exhaust Venting Requirements

- N2 and CO2 displace oxygen. Do not set the instrument and Gas Controller in an enclosed space. Ensure there is adequate airflow.
- Consider installing an oxygen-level sensor to monitor the ambient oxygen level and sound an alarm if the ambient oxygen concentration reaches hazardous levels.

Power Consumption

Special notes

- If a computer system is supplied with your instrument, be sure to account for those electrical outlets.

Instrument Description	Line Voltage and Frequency V, Hz	Maximum Power Consumption VA	Maximum Power Consumption W
Gas Controller	100 – 240 VAC, 50 – 60 Hz	65VA	65W

- 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: BioTek is now Agilent!|Agilent.com

Item Description (including Dimensions etc.)	Vendor's Part Number (if applicable)	Recommended Quantity
CO_2 Specific 2-stage Regulator	Agilent PN 110514, or equivalent. The Agilent regulator has a CGA type connection.	1
N_2 Specific 2-stage Regulator	Agilent PN 1210515, or equivalent. The Agilent regulator has a CGA type connection.	1
CO_2 Flow Meter, 0-1000 SCCM, Vertical Orientation	Agilent PN 1213032 (comes with tubing) or equivalent	1
N_2 Flow Meter, 0-25 SFCH, Vertical Orientation	Agilent PN 1213033 (comes with tubing) or equivalent	1
CO_2 Medical Grade Process Gas	Purchase from local supplier	1
N_2 Medical Grade Process Gas	Purchase from local supplier	1

Waste liquid and gas management

- Please see Exhaust Venting requirements above

Tools (recommended)

- An adjustable wrench will be required to secure the gas tank regulators. Tubing connections are made via barbed fittings so that the tubing may be installed by hand. The flowmeter stand can also be assembled, and the flowmeters installed, by hand.

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 service review or other items of interest for the customer, please write in this box.

Site Preparation Verification

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

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