

6850 GC 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 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.

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

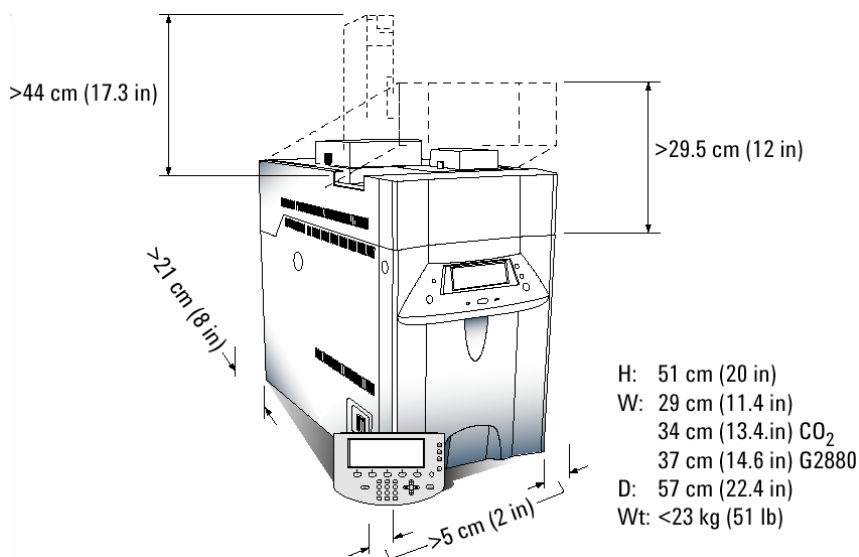
Identify the laboratory bench space before your system arrives based on the table below.

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. Allow at least 21 cm clearance between back of GC and wall to dissipate heated air. See picture below. A simple system that includes a GC and a computer requires about 86 cm of bench space.
2. Avoid bench space with overhanging shelves. A G2880A or G2613A automatic liquid sampler can add about 44 cm to the height of the instrument.

Instrument Description	Weight		Height		Depth		Width	
	Kg	lbs	cm	in	cm	in	cm	in
G2630A Gas Chromatograph	23	51	51	20	57	22.4	29	11.4



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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. The maximum additional heat dissipation from this new equipment is 4800 BTU / hour or 5,064,000 joules / hour. This measurement represents the heat given off when heated zones are set for maximum temperatures.
4. For storage or shipping, the allowable temperature range is -40 to 70°C and the allowable humidity range is 5 to 95% non-condensing.

Instrument Description	Operating temp range °C	Operating humidity range (%)	Maximum altitude (m)
G2629A Hand-held controller	5 to 55	5 to 99	4,615.38
G2630A Gas Chromatograph	0 to 55	5 to 99	4,615.38



Power Consumption

Special Notes

1. The GC power consumption and requirements depend on the type of oven that you ordered and the country the unit is shipping to.
2. Americas 120V standard oven requires 15 amp dedicated line.
3. Americas 120V fast oven requires 20 amp dedicated line.
4. All countries require a dedicated outlet.
5. Power line conditioners should not be used with 6850 GCs.
6. It is very important that the power PCA configuration, main PCA power configuration jumper, and power cord are matched and appropriate for the electrical outlet and supply.
7. A good quality ground is required. Neutral to Ground voltages should not exceed 2.5 Volts rms.
8. If a computer system is supplied with your instrument, be sure to account for those electrical outlets.

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Oven Type	Line Voltage	Frequency (Hz)	Maximum Continuous Power Consumption (VA)	Power Outlet Current Rating
Americas Standard	120 VAC single phase (-10%/+10%)	48-63	1440	15Amp - Dedicated
Americas Fast	120 VAC single phase (-10%/+10%)	48-63	2000	20 Amp - Dedicated
Europe Fast	230 VAC single/split phase (-10%/+10%)	48-63	2000	10 Amp - Dedicated
Japan Standard	Japan 100 VAC single phase (-10%/+10%)	48-63	1440	15 Amp - Dedicated

Special Notes - Oven Exhaust Deflectors

G2628-60800 - Exhaust deflector for the 6850 horizontal blow out

G2630-60710 - Exhaust deflector for the 6850 for an upward (vertical) blow out


Gas Selection and Supply Pressures

Agilent recommends that carrier and detector gases be 99.9995% pure. Air needs to be zero grade or better. Agilent also recommends using traps to remove hydrocarbons, water, and oxygen. The following table lists gases for capillary columns.

Detector	Carrier gas	Make up 1st choice	Make up 2nd choice	Purge or Reference
u-ECD	Hydrogen Helium Nitrogen Argon/methane	Argon/methane Argon/methane Nitrogen Argon/methane	Nitrogen Nitrogen Argon/methane Nitrogen	Anode purge must be same as makeup
FID	Hydrogen Helium Nitrogen	Nitrogen Nitrogen Nitrogen	Helium Helium Helium	Hydrogen and air for detector
FPD	Hydrogen Helium Nitrogen Argon	Nitrogen Nitrogen Nitrogen Nitrogen	None	Hydrogen and air for detector
MSD	Hydrogen Helium	None	None	
TCD	Hydrogen Helium Nitrogen	Must be same as carrier and reference	Must be same as carrier and reference	Reference must be same as carrier and makeup

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Special Notes

1. The table below lists the minimum and maximum pressures in psi for inlets and detectors measured at the bulkhead fitting at the back of the instrument.
2. Conversions: 1 psi = 6.895 kPa = 0.06895 Bar = 0.06805 ATM = 0.0068 MegaPa = 0.07031 kg/cm²
3. Never use liquid thread sealer to connect fittings. Never use chlorinated solvents to clean tubing or fittings.

	FID	TCD	Split / splitless 150 psi	Split / splitless 100 psi	Purged packed
Hydrogen	35-100				
Air	55-100				
Make up	55-100	55-100			
Reference		55-100			
Carrier max			170	120	120
Carrier min			20 psi above pressure used in method		

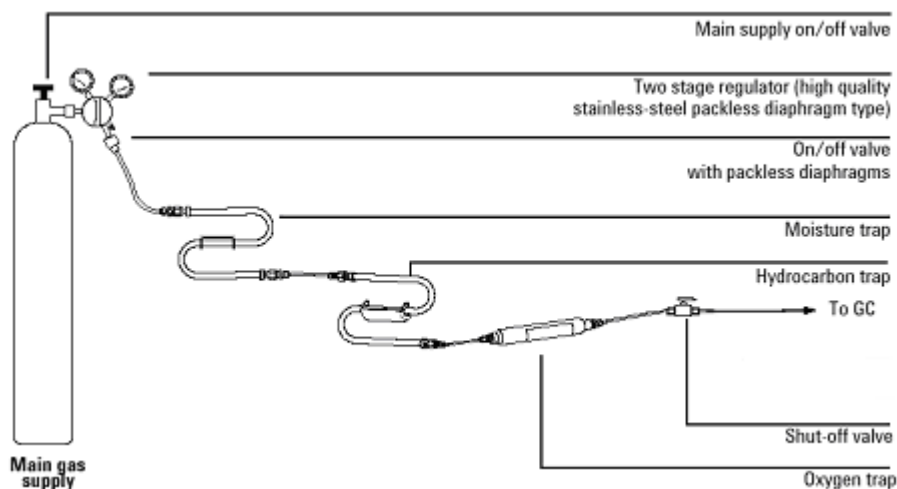
Miscellaneous Gas Plumbing Information

1. Cryogenic cooling for the PTV inlet or GC Oven with Liquid CO₂ requires 1/8-inch heavy-walled, stainless steel tubing – 750-1000 PSI supply – tank with dip tube..
2. Internal Valco® Valve actuation requires a separate pressurized, dry air at 55 psi.

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Gas Supplies
Special Notes

1. Tank supplies require two staged, pressure regulation.
2. To connect the tubing from the instrument to the supply, the supply must have one 1/8-inch Swagelok® female connector for each gas. You may need an adapter for your regulator that ends with the 1/8-inch Swagelok® connector.
3. If your order did NOT include parts to connect the gas supply to your 6850 GC, you must supply pre-cleaned, 1/8-inch copper tubing and a variety of 1/8-inch Swagelok® fittings to connect the gas supply(s).
4. Agilent also recommends using traps to remove water, hydrocarbons, and oxygen or a combination trap that removes all three.



Description	Part number
Moisture trap: preconditioned, metal casing, s-shaped. Contains Molecular Sieve 5A, 45/60 mesh, and 1/8 inch fittings.	5060-9084
Hydrocarbon trap: metal casing, s-shaped trap filled with 40/60 mesh activated charcoal and 1/8-inch fittings	5060-9096
Oxygen trap: glass, indicating, and 1/8-inch fittings.	IOT-2-HP
Big Universal Trap, 1/8-inch fittings. (Removes hydrocarbons, water, and oxygen; Purged with Helium)	RMSH-2
Teflon™ tape (Never use liquid thread sealer to connect fittings.)	0460-1266
MPC Plumbing Kit: One 1/8-inch Swagelok brass TEE; Two 1/8-inch Swagelok brass nut and ferrule sets; Two 1/8-inch ball shutoff valves; Twelve feet of 1/8-inch copper tubing.	G1290-60515
Pressure regulators, Swagelok fittings, tubing, and NPT fittings (Described in Publication 5988-5847)	See catalog

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Other Requirements

Your 6850 GC comes with an analytical column. The default columns are HP-1. There are several optional types. Our checkout standards are designed to work with these columns. In many cases, you will need to select a different column for your application.

Refer to <http://www.chem.agilent.com/scripts/chromatograms.asp> for information on column selection, phase selection, guard columns, retention gaps, conditioning, and method development.

Your GC comes with a few basic tools and consumables depending on the specific inlet and detector that you ordered. Here is a general list of what you will get with your instrument

Tool or consumable	Used for
Inlet wrench	Replacing inlet septa and liners.
T10 and T20 Torx wrenches	Remove covers to access EPC modules, traps, and possible leaks.
¼-inch nut driver	FID jet replacement.
Column cutter	Column installation.
1/8-inch Tee, Swagelok, brass	Connect gas supplies
1/8-inch nuts & ferrules, Swagelok, brass (4)	Connect gas supplies
Inlet septa (5)	Injection port seal
Inlet liner or inserts	Injection port

First time GC users should consider adding the following supplies to maintain their system. Please refer to the Agilent Consumables and Supplies Catalog for part numbers and recommended maintenance periods or visit <http://www.chem.agilent.com/en-US/Products/consumables/Pages/default.aspx>

Tool or supply	Used for
EPC Leak test kit	Leak testing flow paths with electronic pneumatics control.
FID flow measuring insert	FID troubleshooting.
Electronic flow meter	Leak testing and verifying flows
Column cutters	Cutting columns
T10 and T20 Torx drivers	Remove covers to access EPC modules, traps, and possible leaks.
1/8-inch tubing cutter (wire cutter type)	Cut gas supply tubing
Assorted wrenches: ¼, 3/8, 7/16, 9/16	Gas supply and plumbing fittings.
Consumable category	Consumable
Inlet supplies	Septa, o-rings, liners, adapter, and seals
Pneumatic supplies	Gases, traps, o-rings, seals, Swagelok® fittings
Column supplies	Nuts, ferrules, adapters, guard columns, retention gaps
Detector supplies	Jets, liners, adapters, cleaning kits
Application supplies	Standards, columns, syringes

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Tool or supply	Used for
Sampler supplies	Vials, caps, electronic crimpers, and syringes.

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>
- Need supplies? - <http://www.agilent.com/chem/supplies>

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