

Hardware Site Preparation Specification

Purpose of Procedure

Your site must meet this specification or set of requirements to assure a successful and timely installation of your Agilent instrumentation. This document is designed to prevent delays during installation, familiarization, and the initial use of the system in your application. This document outlines the supplies, consumables, space and utility requirements for Sulfur/Nitrogen Chemiluminescence Detector. It also recommends tools and consumables that may help you get started. Use this document along with the Installation documentation and Consumable Catalog. This information is also available from Agilent Technologies, Inc.'s website (<http://www.agilent.com>).

Customer Responsibilities

Make sure your site meets this specification, including: the necessary space, electric outlets, gases, tubing, operating supplies, consumables and other usage dependent items required for the successful installation of instruments and systems. Tubing should be preconditioned, precleaned 1/8" stainless steel or copper. A hydrogen source and oxidant (Air for SCD; O₂ for NCD) source are required, and must be dry and hydrocarbon-free. Bottled gases are preferred for best results. A two-stage regulator is required to provide pressures of 25 psig or less. It is recommended that sulfur traps (SCD only), moisture traps, and oxygen traps be installed prior to gases entering the system. If an oil-sealed pump was selected for the system, provisions must be made to vent the oil mist exhaust, preferably to a fume hood. The XCD is an analog output, and requires an A/D converter if a data system is used to collect data. 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 Information

If you have problems in providing anything described as a *Customer Responsibility*, please contact your local Agilent Technologies office for assistance. Assistance with user specific applications may be provided but should be contracted separately.



Dimensions and Weight



Select the laboratory bench space before your system arrives. Pay special attention to the total height requirements. Avoid bench space with overhanging shelves. Pay special attention to the total weight of the modules you have ordered. Make sure that your laboratory bench can support this weight. The Detector must be placed next to the GC. The preferred location is to the right of the GC (as you face it) but it can also be installed to the left if space requirement prohibit installation to the right.

Module	Weight		Height		Depth		Width	
SCD detector	15.0 kg	34.0 lbs.	40.6 cm	16.0 in	55.3 cm	21.8 in	23.4 cm	9.2 in
NCD detector	17.0 kg	37.5 lbs.	40.6 cm	16.0 in	55.3 cm	21.8 in	23.4 cm	9.2 in
DP Controller	4.5 kg	9.9 lbs	12.7 cm	5.0 in	31.8 cm	12.5 in	24.1 cm	9.5 in
DP Burner	0.9 kg	1.9 lbs	31.2 cm	12.3 in	10.2 cm	4.0 cm	10.2 cm	4.0 in
Vacuum pump-Oil	21.5 kg	47.3 lbs.	26.1 cm	10.3 in	43.0 cm	16.9 in	15.2 cm	6.0 in
Vacuum pump-Dry	13.6 kg	29.9 lbs	30.0 cm	12.0 in	35.6 cm	14.0 in	22.9 cm	9.0 in

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Environmental Conditions



Operating the XCD System within the recommended temperature ranges insures optimum instrument performance and lifetime. Performance can be affected by sources of heat and cold from heating, air conditioning systems, or drafts.

Please Note:

The site's ambient temperature conditions must be stable for optimum performance of the system's modules (as specified in the "Performance Specifications" section of each module's Reference Manual). Temperature changes of 2°C / hour or less (as defined by ASTM conditions) are required to achieve best possible baseline stability. Higher variations will definitely result in higher signal drift and wander of the baseline.

Module	Operating temp range	Operating humidity range
XCD detector	10 to 40°C (50 to 104°F)	< 80%, non-condensing
Vacuum pump	10 to 40°C (50 to 104°F)	< 80%, non-condensing



Power Consumption



PLEASE NOTE:

Additional AC power outlets are required for EACH XCD detector and controller.

Module	Line Voltage	Frequency	Power
SCD or NCD Detector	115 VAC	50/60 Hz	550 W
	100 VAC	50/60 Hz	550 W
	220-230 VAC	50/60 Hz	550 W
Dual Plasma Controller	110-120 VAC	50/60 Hz	200 W
	220-240 VAC	50/60 Hz	200 W
Vacuum Pump	115 VAC	50/60 Hz	200 W
	220-240 VAC	50/60 Hz	200 W



Other considerations



Vacuum pump installation

- Provisions should be made to install the pump within six feet of the XCD detector. If the vacuum pump is placed on the floor, the vacuum hose must be able to reach to the back of the detector. Alternately, the pump can be placed on the bench, if the bench meets the weight and space requirements.
- If using an oil vacuum pump, it is advisable to output the pump exhaust to a lab vent or hood. The exhaust line should have a bend in it to prevent any condensation from running back into the pump.

Gas Requirements

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- The XCD systems require the following gas connections. Input pressures specified are the maximum allowed.
- Agilent recommends that detector gases be 99.9995% pure.
- Supply instrument gases using tanks, an internal distribution system, or gas generators. If used, tanks require two-stage pressure regulators with packless, stainless steel diaphragms. Generators should provide a minimum outlet pressure of 60 psig that is then controlled by a two stage regulator to 25 psig.
- The XCD System requires 1/8-inch Swagelok connections to its gas supplies. Plumb the gas supply tubing/regulators so that one 1/8-inch Swagelok female connector is available for each gas needed.
- The Table shows maximum delivery pressures and gas types for each connection on the back of the instrument.

Module	Air	Oxygen	Hydrogen
SCD Detector	25 psig (172kpa)		
NCD Detector		25 psig (172kpa)	
NCD Detector (Nitrosamines)		25 psig (172kpa)	
Dual Plasma Controller - SCD	25 psig (172kpa)		25 psig (172kpa)
Dual Plasma Controller - NCD		25 psig (172kpa)	25 psig (172kpa)
Dual Plasma Controller - Nitrosamines		25 psig (172kpa)	

Spare Parts/Installation Parts

Description	Agilent Part Number
Sulfur, Hydrocarbon and Moisture Trap (1/8" Fittings) 200 CC	HMT-200-2
Sulfur, Hydrocarbon and Moisture Trap (1/4" Fittings) 200 CC	HMT-200-4
Analog Input Board for 5890 GC	19261-60010
Analog Input Board for 6890 GC	G1556-60010
Analog Input Board for 7890 GC	G3456-60010
Insulation Ring for Dual Plasma Burner Mount ¹	G6600-00011
AIB Cable for 6850/6890/7890 GC (DIN x BNC)	G6600-60800
Vacuum Hose (15 inch) with Interface Kit for Oil Pump Exhaust	G6600-60026
Vacuum Hose, 6 foot length	G6600-60025
Test Mixture for SCD ²	G2933-85001
Test Mixture for NCD ²	G2933-85022

¹ This ring is included with the G6600-60601 Dual Plasma Mounting Kit

² Shipped with new systems