

# 510 Environmental

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## Temperature and humidity ranges

Operating the GC within the recommended ranges insures optimum instrument performance and lifetime.

<b>Recommended temperature range</b>	<b>Temperature range</b>
20 to 27°C	5 to 40°C

<b>Recommended humidity range</b>	<b>Humidity range</b>
50 to 60%	Up to 31°C, 5 to 80%
	At 40°C, 5 to 50%

### **Recommended altitude range**

Up to 2000 m

After exposing the GC to extremes of temperature or humidity, allow 15 minutes for it to return to the recommended ranges.

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## Ventilation requirements

The GC is cooled by convection: air enters vents in the side panels and underneath the instrument. Warmed air exits through slots in the top, rear, and side panels. Do not obstruct air flow around the instrument.

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**Caution** For proper cooling and general safety, always operate the instrument with cover panels properly installed.

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### **Venting oven exhaust**

Hot air (up to 450°C) from the oven exits through a vent in the rear. Allow at least 20 cm (10 inches) clearance behind the instrument to dissipate this air.

**WARNING** Do not place temperature-sensitive items (for example, gas cylinders, chemicals, regulators, and plastic tubing) in the path of the heated exhaust. These items will be damaged and plastic tubing will melt. Be careful when working behind the instrument during cool-down cycles to avoid burns from the hot exhaust.

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If space is limited, the Oven Exhaust Deflector (part no. 19247-60510) may improve oven cooling. It diverts exhaust air up and away from the instrument. You can connect it to a 10.2-cm (4-inch) exhaust-duct system, route the exhaust to a fume hood, or vent the exhaust outside the building with 10.2-cm diameter (4-inch diameter) furnace duct.

### **Venting toxic or noxious gases**

During normal operation of the GC with many detectors and inlets, some of the carrier gas and sample vents outside the instrument. If any sample components are toxic or noxious, or if hydrogen is used as the carrier gas, the exhaust must be vented to a fume hood. Place the GC in the hood or attach a large diameter venting tube to the outlet for proper ventilation.

To further prevent contamination from noxious gases, you can attach a chemical trap (part no. G1544-60610) to the split vent.

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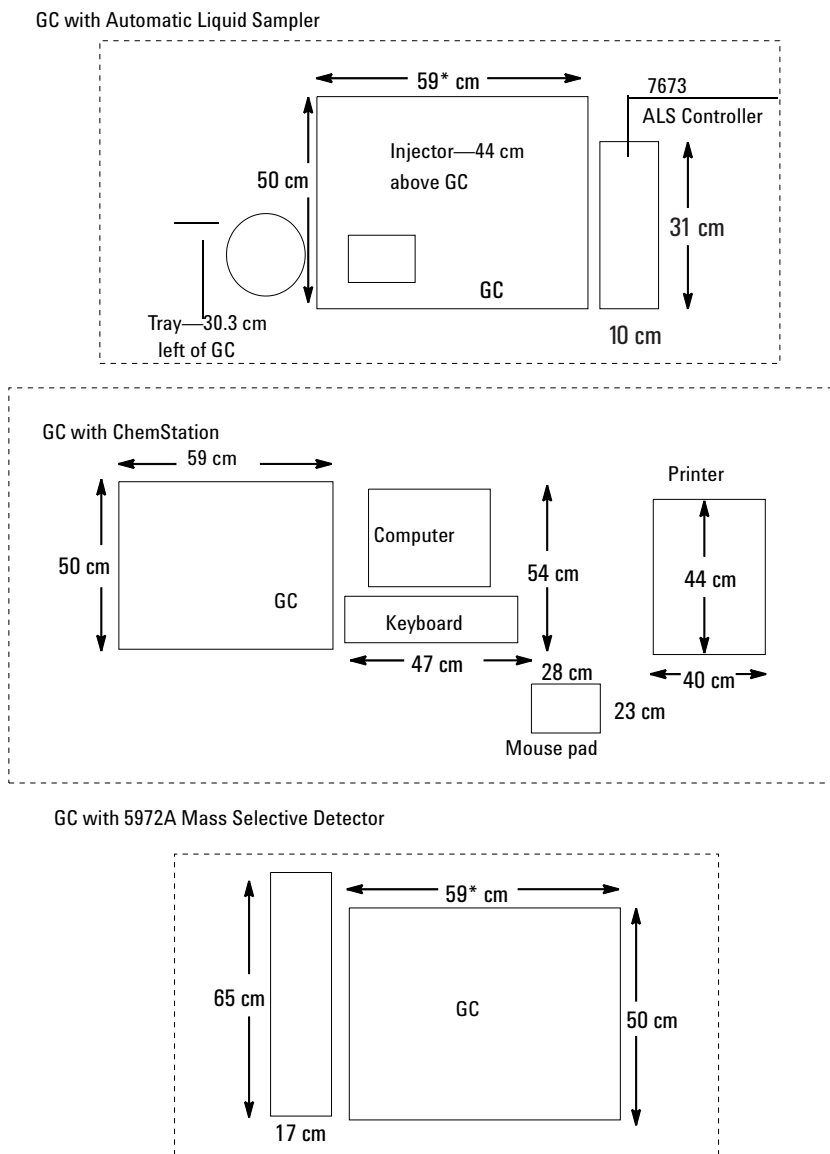
## **Benchtop space requirements**

The GC with electronic pneumatics control (EPC) is 59 cm (23 inches) wide. The nonEPC model is 68 cm (26.7 inches) wide. Both are 50 cm (21 inches) high and 50 cm (21 inches) deep.

The area above the GC should be clear, with no shelves or overhanging obstructions that limit access to the top of the instrument and interfere with cooling. You may need additional space for other instruments used with your GC. Figure 510-1 shows some common system configurations.

Table 510-1 presents the dimensions, power requirements, heat production, and weight of the GC and other Agilent instruments often used with it. Use this table to insure that you have adequate space and power for the entire

system. Allow at least 10.2 cm (4 inches) space between instruments for ventilation.



\*68 cm for non-EPC version.

**Figure 510-1 Common GC-system configurations—top view**

**Table 510-1 Dimensions, Power, Heat Production, and Weight**

<b>Instrument</b>	<b>Height</b>	<b>Width</b>	<b>Depth</b>	<b>Power (VA)</b>	<b>Heat</b>	<b>Weight</b>
<b>6890 Gas Chromatograph</b>						
EPC version	50 cm 20 inches	59 cm 23 inches	54 cm 21 inches	2,250	8,100 KJoules 7,681 Btu/hr	50 kg 112 lb
Non-EPC version	50 cm 20 inches	68 cm 27 inches	54 cm 21 inches	2,250	8,100 KJoules 7,681 Btu/hr	56.8 kg 125 lb
Fast heating oven, same for EPC and non-EPC	—	—	—	2,950	10,620 KJoules 10,071 Btu/hr	—
<b>Automatic Liquid Sampler</b>						
G1512A Controller (7673)	10 cm 4 inches	33 cm 13 inches	38 cm 15 inches	320 max	545 KJoules 515 Btu/Hr	7.3 kg 16.0 lb
G1513A or G2613A Injector	44 cm above GC 17 inches above GC					
18596 or G2614A Tray	31 cm left of GC 9 inches left of GC					
<b>Computer*</b>						
Computer with monitor	54 cm 21 inches	42 cm 17 inches	39 cm 15 inches	N/A	N/A	N/A
Keyboard	5 cm 2 inches	47 cm 18 inches	18 cm 7 inches	N/A	N/A	N/A
<b>5972A Mass Selective Detector</b>						
	35 cm 14 inches	17 cm 7 inches	65 cm 26 inches	254 max	3,158 Btu/hr, 3,000 with GC	22.7 kg 50.0 lb
<b>7694 Headspace Sampler</b>						
	31 cm 16 inches	56 cm 22 inches	39 cm 22 inches	420 max	2,215 KJoules 2,100 Btu/hr	35.8 kg 79.0 lb
<b>Printer**</b>						
	30 cm 12 inches	42 cm 16 inches	40 cm 16 inches	300 max	N/A	16.8 kg 37.0 lb
<b>Integrators</b>						
3397 Series, 3396 Series III and, 3395 Integrators	13 cm 5 inches	46 cm 18 inches	46 cm 18 inches	50	135 KJoules 120 Btu/hr	4.3 kg 9.5 lb
<b>35900C/D/E Analog-to-Digital Converter</b>						
	11 cm 4 inches	33 cm 13 inches	29 cm 11 inches	40	216 KJoules 205 Btu/hr	4.1 kg 9.0 lb
* General specifications for a mid-size, desktop computer						
** General specifications for a typical printer						

