Manual Flow Controllers, 
Accessories G4320A and G4321A 

Installation Guide

Accessories G4320A and G4321A for the Agilent Technologies 6820 Gas Chromatograph consist of one or two extra flow controls and a head pressure gauge (0–100 psi) on a mounting bracket. When there are two flow controllers present (Accessory G4321A), they will be labeled 1 and 2 with the head pressure gauge connected to 1.

The extra flow controllers supply controlled carrier gas to valve systems. Their use is shown in the valve system diagram supplied with the Agilent 6820 Series Chromatograph.

CAUTION

Please do not use flow controllers as shut off valves. Closing them tightly to stop gas flow will cause permanent damage to the flow controller.
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Knob</td>
</tr>
<tr>
<td>2</td>
<td>Knurled nut</td>
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<tr>
<td>3</td>
<td>Top nut</td>
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<tr>
<td>4</td>
<td>Top lock washer</td>
</tr>
<tr>
<td>5</td>
<td>Tube plug</td>
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<tr>
<td>6</td>
<td>O-ring</td>
</tr>
<tr>
<td>7</td>
<td>Pressure gauge</td>
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<tr>
<td>8</td>
<td>Bracket</td>
</tr>
<tr>
<td>9</td>
<td>Jumper tube</td>
</tr>
</tbody>
</table>
Installing the Flow Controller

The flow controller accessory can be installed either underneath the existing flow controllers or in place of one of the inlet flow modules.

To install the accessory flow controller under the existing flow controllers:

1. Turn off the detectors.
2. Set the oven to 25 °C and turn off all other heated zones.
3. Turn off all carrier and detector gases at their sources.

NOTE

Carrier gas flow must be maintained until the column has cooled to avoid column damage.

4. Turn off the main power switch.
5. Disconnect the power cord from the power source. Some internal parts carry power if the cord is connected.
6. Remove the left side cover. The auxiliary flow controller will fit into place underneath the existing flow controllers. See Figure 1.
7 Fasten the flow controller into place using two Torx T-20 screws (see Figure 2).
8 Tighten both sheet metal screws to hold the assembly in place.

9 Route the tube to the valve box. It is the primary carrier “in” tube for the valve system.

10 Plumb the valve system and bring carrier gas from its source to the flow controller(s). Plumb only with clean tubing and use gas traps (part number 5060-9084) at the source to prevent contamination of the system.

11 Pressure check the system to make sure the accessory and the system are leak-free.
To install the accessory flow controller in an inlet flow module position:

1. Turn off the detectors.
2. Set the oven to 25 °C and turn off all other heated zones.
3. Turn off all carrier and detector gases at their sources.

**NOTE**

Carrier gas flow must be maintained until the column has cooled to avoid column damage.

4. Turn off the main power switch.
5. Disconnect the power cord from the power source. Some internal parts carry power if the cord is connected.
6. Remove the left side cover.
7. Remove the existing inlet label plate from the module location to be used and install the one provided.
8. There are threaded studs on the back of the main flow panel for installing the flow controller. Place plastic spacers onto the studs. Then place the flow controller onto the studs and secure it loosely with hex nuts started onto each stud.
9 Route the tube to the valve box. It is the primary carrier “in” tube for the valve system.

10 Plumb the valve system and bring carrier gas from its source to the flow controller(s). Plumb only with clean tubing and use gas traps (part number 5060-9084) at the source to prevent contamination of the system.

11 Pressure check the system to make sure the accessory and the system are leak-free.
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CAUTION

A CAUTION notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood and met.