## How to Build a Custom SRI GC

### 1. Pick a chassis.

What is your application?

If you will be injecting by gas sampling valve, purge & trap, thermal desorber or any other injector types in addition to on-column, then choose our versatile Model 8610C, which can mount up to five different injectors simultaneously.





For dual oven applications or "two GCs in one," choose the 8610D chassis.

If you will be injecting by syringe only, you can choose the ultra-compact Model 310.



For industrial rack systems, choose our 410 rack mount chassis.



If you want to add detectors to an existing GC, choose the Model 110.

110.

For any model chassis except the 110, you must specify the data system model you want. A single channel data system is included as standard equipment with the 8610, 410 and 310 GCs. If you'll be ordering more than one detector on your GC, you will need a four or six channel data system. The one and four channel data systems connect to your computer's serial port, while the six channel model connects to a USB port.

## 2. Choose your detectors.

Detector types are selected depending on the particular application, the required detection limit, matrix interferences and/or regulatory guidelines. Since all five of our chassis can mount up to four (sometimes five or six) detectors simultaneously, you can perform a surprising variety of applications with one instrument.

DETECTOR	SELECTIVITY	SENSITIVITY (approximate)
CCD	hydrogen and hydrocarbons	500ppm
TCD	universal	200-500ppm
FID	hydrocarbons	1ppm
DELCD	chlorinated and brominated molecules	10ppb
FID/DELCD	hydrocarbons, chlorinated and brominated molecules	10ppm
HID	universal, except neon	10ppm
PID	aromatics and molecules with double carbon bonds	10ppb

FID Dual FPD

hydrocarbons, sulfur and phosphorus simultaneously

100ppm, 200ppb and 10ppb

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### 3. Choose your injectors.

Injector types are selected by the user depending on the particular measurement application, detection limit and regulatory requirements. Twelve injector types are available for installation on SRI GCs. Up to five injectors may be mounted simultaneously on the Model 8610C or 8610D. The Model 310 will accommodate a single On-column, Heated Flash Vaporization, Heated Split/Splitless, or PTV Injector. The On-Column Injector is standard equipment on every 8610C, 8610D and 310 GC. Heated Flash Vaporization, Heated Split/Splitless and PTV Injectors are all upgrades to the standard On-Column Injector.

### Sample Types and Appropriate Injectors

LIQUIDS: On-column, Heated Split/Splitless, Heated Flash Vaporization, PTV, Heated Static Headspace,

Purge & Trap, Liquid Injection Valve, Liquid Autosamplers or Headspace Autosampler

SOLIDS: Thermal Desorber, Heated Static Headspace, PTV or Headspace Autosampler

GASES: On-column, Gas Sampling Valve, Method TO-14 Air Concentrator or Heated Static Headspace

SPME: Heated Flash Vaporization with Low Volume SPME Liner or Heated Split/Splitless

#### 4. Accessorize.

Our built-in, "whisper quiet" air compressor can supply air carrier gas or detector makeup gas.





We have Gas Line Installation Kits for any type of gas required for SRI GC systems operation.

The Methanizer accessory allows FID detection of CO and CO<sub>2</sub> down to ppm.





The H<sub>2</sub>-50XR hydrogen generator supplies up to 50mL/min at 30psi.

Although many injectors and detectors can be built into every GC chassis, there are instances where certain components would occupy the same space, or we just run out of room. If you are not sure if everything you want will fit, call one of our knowledgeable technical support agents for help.

8690-CONF

**Custom configuration** 

Call

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## **SRI Gas Chromatograph Overview**

From our family of Gas Chromatographs, select the model which best fits your needs.



The full-featured Model 8610 GC can mount up to four detectors, five injectors and a host of accessories, yet is still small enough to ship UPS/FedEx or even carry as airline baggage with you on your expeditions into the field. It also fits easily on your crowded laboratory bench.



The Model 8610D is identical to the 8610C except that it has dual temperature programmable column ovens.



The compact Model 310 can mount four detectors and one injector. Consider this GC when you want the smallest laboratory GC available and plan to inject using a syringe.



Choose the rack-mountable Model 410 for standard 19-inch industrial rack systems.



The ultra-compact Model 110 can mount up to four detectors and connects to a host GC (SRI or another brand) via a heated transfer line. Pick this model when you need to add detectors to an existing GC or want GC detector performance without a chromatographic separation (total hydrocarbon stream monitoring, etc.).



#### Standard Features of All SRI GC Models:

- Built-in, single channel PeakSimple data system
- Heavy-duty, all-aluminum construction for lightweight durability.
- "At-a-glance" panel display that reports the status of system heating, pressure, and voltage control zones to the bright and easy-to-read display.
- Electronic Pressure Control (EPC) for all regulated gas pressures. EPC results in enhanced day-to-day reproducibility compared to mechanical pressure regulators and allows the carrier gas pressure to be ramped from the data system.
- Four, five or six simultaneous detector capability—choose from 16 detector types.
- Two year warranty and FREE technical support.
- Rugged reusable plastic container which ships UPS/FedEx and also as airline baggage. The GC is secured in the shipping container using a system of belts and buckles which eliminates the need for extra styrofoam peanuts, bubble wrap and other annoying packaging materials.

Since the typical GC weighs about 60lbs in the shipping container, it is easily carried by one person.

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**SRI GC Overview** 



# **GC Column Oven Options**

## Three temperature programmable oven types are available for SRI GCs:

1) The large air bath column oven comes standard on the 8610C chassis. This oven will accommodate a single column on a seven inch diameter cage, or multiple columns coiled on smaller cages or bundled without a cage. This oven is rated to 400°C and is equipped with a 600 watt heater and fast cool-down fans.



The small air bath column oven comes standard 2) on the Model 310 chassis. This oven will fit multiple columns coiled within five inches diameter (3.5" or 4" coil size preferred). This oven is also rated to 400°C and is equipped with a 600 watt heater and fast cool-down fans. With the same heater wattage and cool down fans as the large oven in a smaller volume, this oven heats and cools faster. Dual, independently programmable small air bath ovens are installed on the Model 8610D GC chassis. The second oven is 4.5" wide, so only columns coiled smaller than four inches in diameter can be used.

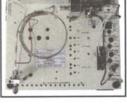




The Virtual Oven™ is optionally available on the 8610C, 8610D and 310 GC 3) chassis; use part number 8690-1000 to request it in place of an airbath column oven. The Virtual Oven™ provides for the programmable heating and very rapid cooling of a 1/8" OD packed column up to two meters in length. Using low voltage AC to resistively heat the column, the column itself becomes the heater. The advantages of the Virtual Oven<sup>TM</sup> are:



- Temperature ramp rates up to 99 degrees per minute are possible a)
- Cool-down is very fast (250° to 50° in one minute) b)
- Temperature control very close to ambient (ambient +3°C) c)
- d) Low power consumption



GC Column Oven Options

