

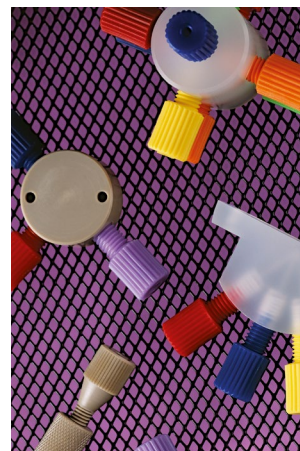
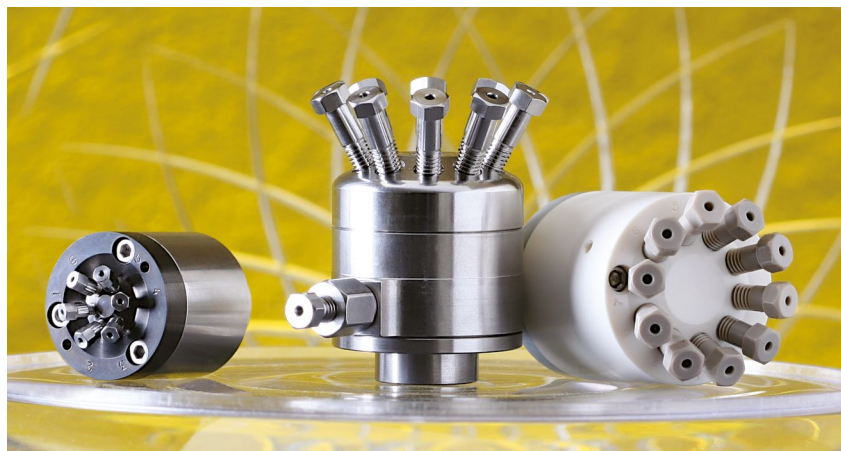
**VALCO  
CHEMINERT  
CATALOG**

**VICI**

**TOOLS FOR SCIENCE AND MEDICINE**

**INJECTORS  
VALVES  
DETECTORS  
FITTINGS  
SYRINGES  
TUBING**

**CATALOG 65 INT**





**2** New products



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**56** Cheminert fittings



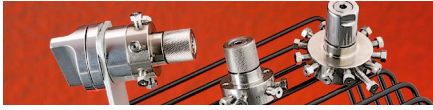
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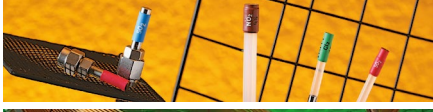
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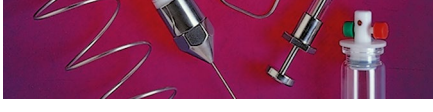
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To order

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**REGULATIONS**



As a worldwide supplier of products for the analytical instrument market, we work hard to make sure those products comply with regulatory requirements around the world. All machined products (valves, fittings, etc.) are fully RoHS/REACH/WEEE compliant. Most of the electrical products we manufacture are also CE tested and certified. Only a few legacy products are not CE certified.

See page 263 for a list of non-CE items.



## Welcome to VICI

VICI is an acronym for Valco Instruments Company Inc. VICI now defines multiple companies which manufacture various products for the analytical industry.

### VICI Valco Instruments

For over 40 years, Valco Instruments has been the leading designer and manufacturer of standard and custom components for precision analytical, biomedical, and biocompatible instrumentation. In addition to Valco and Cheminert® valves and fittings, we offer a wide range of related products such as electric and pneumatic actuators, tubing and sampling loops, heated enclosures, valve sequence and temperature controllers, gas purifiers, GC detectors, and digital interfaces.



**Fafnir, one of a long line of Valco Saint Bernards, at the Houston, Texas office**

### VICI AG International

VICI AG International, in Schenkon, Switzerland, is an independent site for the manufacturing of Valco and Cheminert valves and the handling of all VICI product lines in Europe, Africa, the Middle East, and the Far East. Present certification is ISO 9001:2008 and 14001:2004.

### VICI Metronics

VICI Metronics, Inc. is the leading manufacturer of devices and instruments that are used in the generation of calibration gas standards. The line includes Dynacal and G-Cal permeation tubes, Dynacalibrator calibration gas generators, and gas monitors. Metronics is the leading provider of



**Our engineering/development facility on Waterbury Drive in Houston**

explosives, narcotics, and chemical warfare dopants for TSA airport security (ammonia, DCM), law enforcement, border patrol, military, and other trace detection industry professionals.

We offer high performance gas specific purifiers suitable for use in GC/MS and LC/MS systems. The helium, hydrogen, nitrogen, and air purifiers remove sulfur and nitrogen compounds, halocarbons, hydrocarbons, moisture, oxygen, and other contaminants.

The Metronics facility also houses production of and support for Valco-Bond and ValcoPLOT capillary columns.

### VICI Precision Sampling

Your resource for syringes, Mininert® valves, probes, and tubing. Our pre-cut stainless steel tubing is available in standard lengths, or cut and bent to your specifications. All our syringes feature ultra smooth bores, easily replaceable parts, low dead volume, crisp clean gradations, and precision calibrations.

### VICI Valco Canada

Products from all VICI companies are available in Canada directly from this location. We also supply and support our Canadian dealers and OEMs.



**VICI Precision Sampling Baton Rouge, Louisiana**

#### CONTACT US

See box on facing page for:

**VICI Valco Instruments**  
**VICI AG International**  
**VICI Valco Canada**

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**VICI AG International in Schenkon, Switzerland**



**VICI Metronics Poulsbo, Washington**



**VICI Valco Canada Brockville, Ontario**

# New products

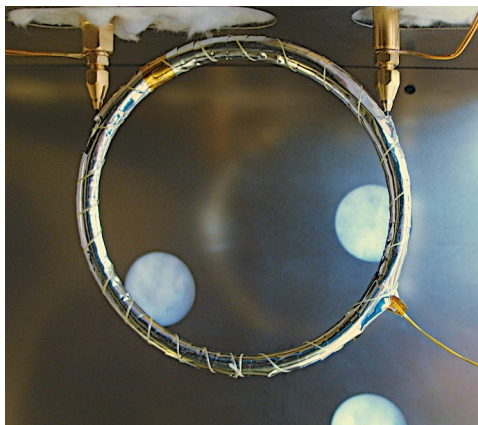
THE LATEST FROM VICI

**NEW**

## Fast GC conversion kit for 6890/7890 GCs

Components for Fast GC . . . . .page 4

These kits include everything you need to turn your standard GC into a high-speed analytical machine. Just specify the column you want and we'll provide the rest. The typical kit takes just an hour to install, with complete step-by-step instructions included. All that's required is a small hole in the top of the column oven, and we even provide the drill bit!

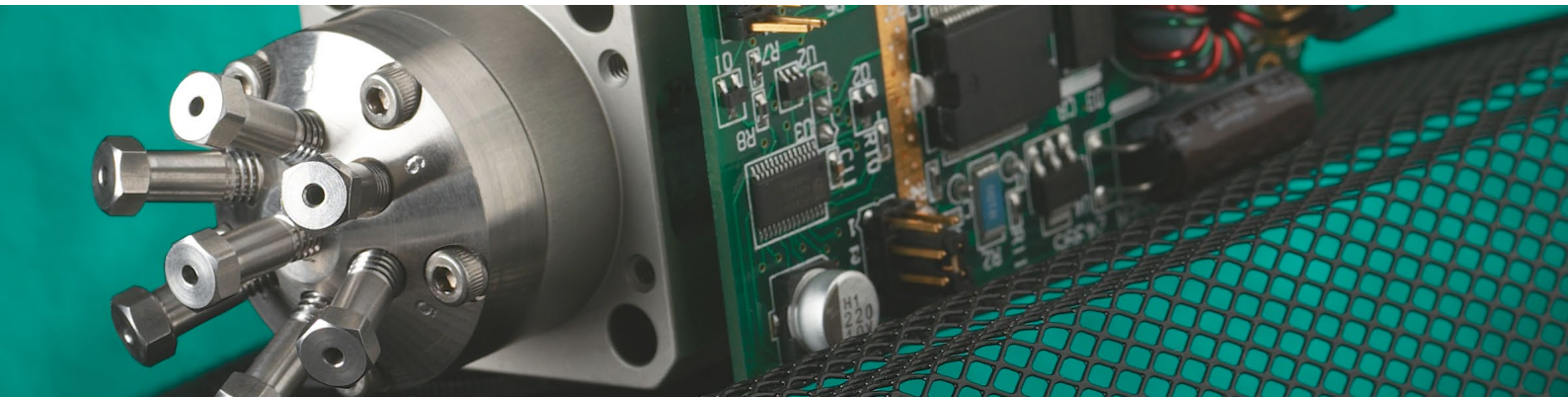


**NEW**

## Fast GC components turbocharge analyses

Column temperature controller . . . . .page 5

Our Fast GC controller provides programmable temperature control for analysis-optimized column bundles. The programmable controller coupled with a column bundle (we can provide one using our fused silica column or yours) slashes conventional analytical times. The result of years of research, these systems provide high throughput analyses at a fraction of the cost of a conventional GC.







**NEW**

**Mini PDD detector helps pay for itself**

miniPDD Model D-2-IM ..... page 222

The miniature D-2-IM consumes less than one fifth as much helium as its big brothers, our popular D-3 and D-4 pulsed discharge detectors. With the ever-increasing price of helium, this can represent savings of hundreds of dollars per year. With robust performance, easy maintenance, and nearly the same sensitivity as the larger models, the mini PDD is the clear choice for field portable applications and for labs concerned about operational costs.

**NEW**

**New modular universal actuator to replace the microelectric**

Modular universal actuator ..... page 194

This new version of the popular universal actuator gives greater flexibility for the instrument manufacturer working in the limited space frequently encountered in modern instruments. The design also makes it possible to mount the more sensitive electronics module away from the liquid end of the valve. The modular unit has all the features of the composite model, allowing instrument manufacturers to use a single motor and control software to operate virtually any Valco or Cheminert rotary valve, with greater programmability plus optional communication interfaces.



**NEW**

**Special adapters ease connectivity to 360 micron tubing**

Internal reducers for 360  $\mu$ m tubing ..... page 38

External to internal reducer for 360  $\mu$ m tubing ..... 39

Our unique 360 micron fittings permit direct connection to any capillary tubing with 360  $\mu$ m OD. But making the transition to valves or other fittings with larger tubing meant using a union. Now you can minimize the number of connections using our IZR and EZR adapters. IZR permits plumbing 360  $\mu$ m tubing directly into a 1/16" or 1/32" Valco fitting detail, and the EZR permits the same connection to 1/16" external details. Available in PEEK or stainless steel.



**NEW**

## Components for fast GC

### The Problem

In the quest for more rapid chromatographic results, there are two distinct avenues – the small, portable instruments made specifically for use in the field, and traditional GCs which are modified to accelerate the analysis. The components developed by Valco engineering exceed the requirements of both approaches.

### The Solution

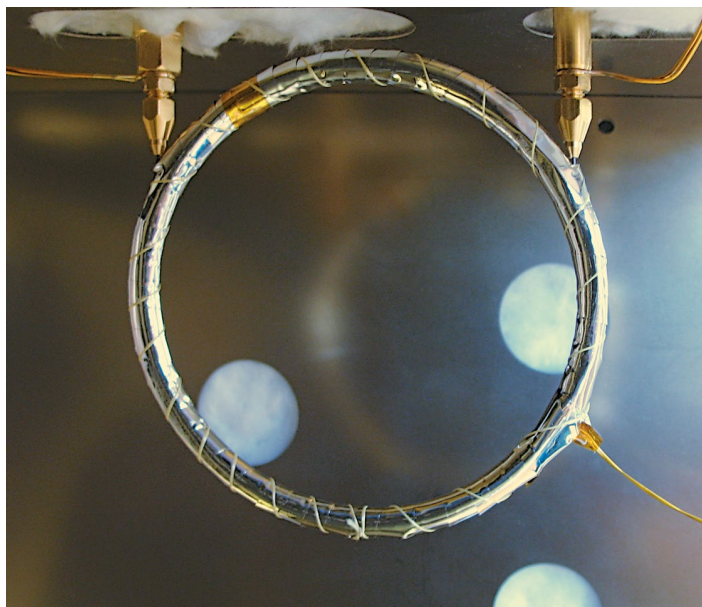
Valco now offers a variety of components which can be used individually or in concert with others to provide the optimal solution for the analysis.

- Resistively-heated low mass columns
- Fast temperature controller
- Pulsed discharge detector (PDD)

Our valves can provide the necessary sample injection, and resistively-heated columns dramatically decrease analysis time. The fast temperature controller offers provisions for multiple ramp temperature programming with a user-friendly Windows interface and a compact size suitable for use in the lab or in the field. Column temperature is controlled by regulating the amount of current applied to the wire-wrapped or nickel-clad capillary column.

We offer a variety of detector options to suit a wide array of applications – from our TCD to our popular PDDs (pulsed discharge detectors), which can be tuned for optimal analyte specificity. Our new miniPDD (page 222) is ideal for portable applications or for areas where helium use must be minimized.

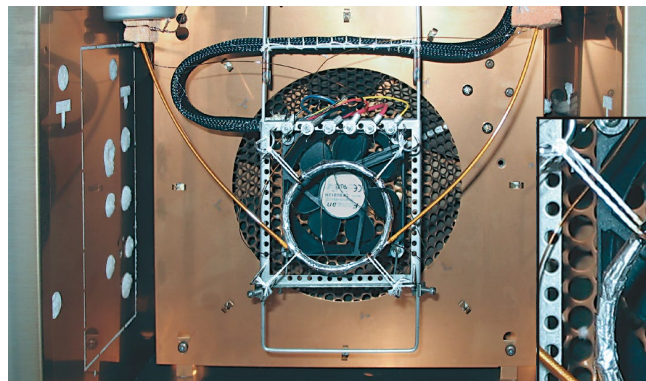
So whether you have a traditional lab GC that you want to turbo-charge or are building a portable GC for rapid analyses, our extensive line of fast GC components can help get the job done on time and on budget.



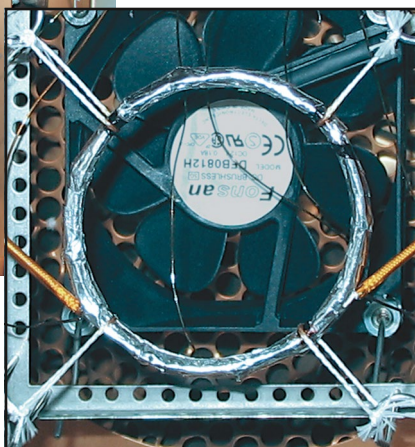
Column kit installed in Agilent 6890 column oven



View of relocated Agilent FID to permit use of fast GC column kit



Resistively-heated column installed in traditional column oven



**TO DISCUSS YOUR REQUIREMENTS IN DETAIL, CONTACT OUR TECHNICAL DEPARTMENT**

#### MORE INFORMATION

Fast GC temperature controller . . . . .page 5  
 miniPDD . . . . .222  
 PDD Pulsed discharge detector . . . . .223  
 TCD Thermal conductivity detector . . . . .227



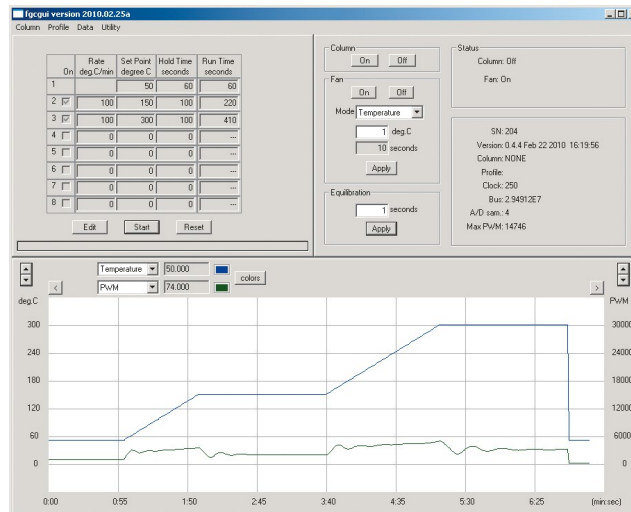
## Column temperature controller

- For use with nickel-wire and nickel-clad resistively-heated columns
- Programmable 8-state temperature profile
- Compatible with any GC or analyzer
- User-friendly Windows-based control and monitor program
- OEM and end user versions available

The VICI column heating unit is designed for precise temperature programming with rapid heating and cooling of a low mass nickel-clad or nickel-wire column. The column is resistively-heated by applying a low-voltage current to the column coating or wire, eliminating the need for a traditional GC column oven and heating element with their power and space requirements. Column temperature is controlled by regulating the amount of current, with a small fan for quickly cooling the low-mass column to near-ambient temperature.

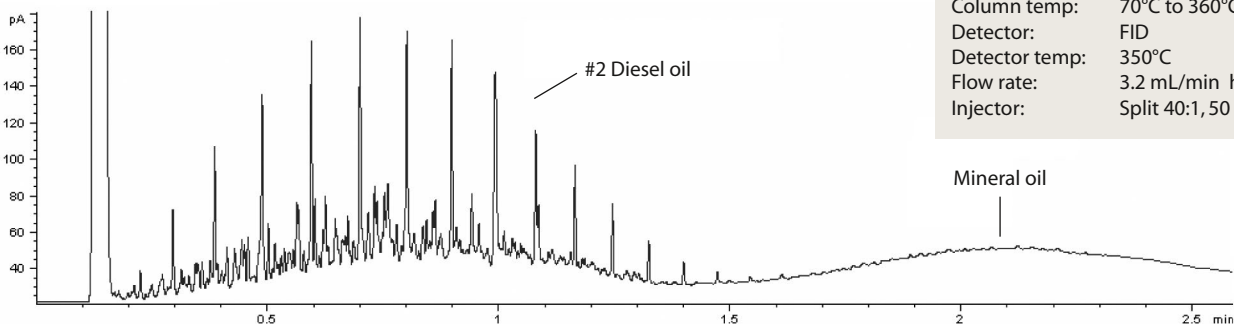
These features plus speed, compact size, and low power requirement make this unit an ideal component in fast, portable GCs, but it can be easily employed on any GC or analyzer.

The Windows-based control program (*screen capture below*) facilitates simple creation of temperature profiles with as many as eight states, and allows multiple columns to be tuned with each configuration saved for reloading. Multiple data parameters can be graphed, with data logged and analyzed.



### SPECS

Programmable temperature states	8
Fan modes	4
Max ramp rate	5m column 1,200°C/min 15m column 500°C/min
Accuracy	Isothermal 0.1°C Programmed <0.5°C, in most cases
Interfaces	USB, I <sup>2</sup> C



### #2 DIESEL PLUS MINERAL OIL

Column: VB-5  
5 m x 0.10 mm x 0.10  $\mu$ m,  
Nickel-wire  
Column temp: 70°C to 360°C at 120°C/min  
Detector: FID  
Detector temp: 350°C  
Flow rate: 3.2 mL/min helium  
Injector: Split 40:1, 50 psi, 280°C