

Simplify your GC Connections



- Chemically inert
- Superb operational stability
- Low dead volume
- Easy to install and leak free

Achrom

SGE Analytical Science

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SGE Recognizes the Importance of Connections in Your GC



Currently available connectors suffer from issues with reliability, robustness, excessive dead volumes and inertness, leading to poor chromatography and instrument down time.

SGE's range of GC Connections are designed to minimize your time spent on installation. Our range includes:

- **SilTite™ µ-union** - designed to connect columns without the complications of conventional connectors.
- **SilFlow™ microchannel device (MCD)** - for your column splitting needs, ensures no detectable peak distortion is observed through precise channel and ferrule design.
- **SilTite™ FingerTite** systems for each injector and detector, simplify your GC column installation.

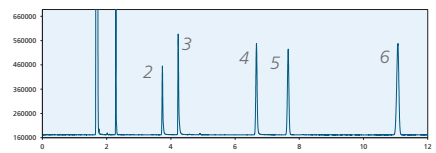
SGE GC Connections deliver these enhanced chromatography features:

- *Chemically inert*

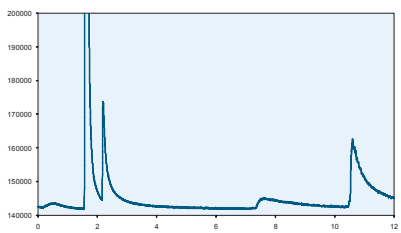
Enabled by SGE's expertise in surface chemistry, each metal surface is treated to ensure optimized chromatography.

Figures a and b: Impact of non-deactivated metal surfaces on chromatography: Lost peaks and poor resolution.

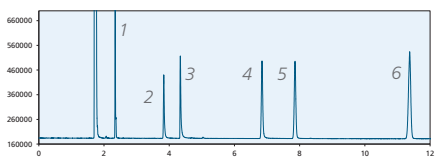
Figure c: Fully resolved peaks and retention of analytes when using SGE's GC Connections.



a) Column only.



b) Column with metal connector without special deactivation.



c) Column with deactivated SilFlow™ (GC Dean's switch).

Column: *BPX5 30 m x 0.25 mm ID x 0.25 µm (P/N 054101)*
Column Temperature: *140 °C*
FID Temperature: *380 °C*
Injector Temperature: *240 °C*
Sample: *1 ng on-column of (1) n-Decane (2) 4-chlorophenol (3) n-Decylamine (4) Undecanol (5) Bi phenyl (6) Pentadecane*

- *Superb operational stability*

All of SGE's GC Connections are manufactured from high grade stainless steel, and have minimal thermal mass, ensuring there is minimal thermal lag during use. The use of stainless steel also means there is no practical limit to their maximum temperature, the only limitation is the temperature rating of the GC column.

- *Low dead volume*

SilTite™ FingerTite and SilFlow™ FingerTite ferrules used in SGE GC Connections result in low dead volume fittings giving you optimal peak shapes.

- *Easy to install and leak free*

Each of SGE's GC Connections are designed with FingerTite fittings that are easy to set up and can be tightened using finger force to achieve a perfect, reliable seal, even for the most sensitive MS systems – no wrenches required!

SilTite™ µ-Union



The SilTite™ µ-union is a connector for GC Capillary columns. It is useful for connecting a pre-column or a guard column. This tiny connection will make a big difference to your chromatography!

Low thermal mass: 9 mm in length and mass <0.5 g.

Available in kits to connect a range of columns from 0.1 mm ID through to 0.53 mm ID.



Kits contain:
5 x ferrules
2 x union fittings
Installation jigs
Installation instructions

Part Number	Column 1 ID (mm)	Column 2 ID (mm)
073560	0.1 – 0.25	0.1 – 0.25
073561	0.1 – 0.25	0.32
073562	0.1 – 0.25	0.53
073563	0.32	0.32
073564	0.32	0.53
073565	0.53	0.53

Replacement parts available – contact your local SGE office or Authorized Distributor.

The SilTite™ µ-union comes fitted standard when you order an SGE GC Capillary column with integrated guard (5 m). Just add SGXX to the end of the column part number where XX is the column ID e.g. 054101SG32 for a 0.32 mm ID guard on column part number 054101.

SilFlow™



SilFlow™ micro fluidic platform enables maximum chromatography performance. Common uses include column switching and splitting, back flushing, GC x GC.

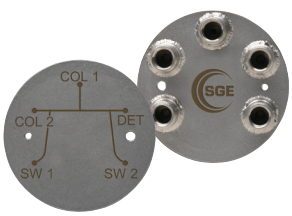
SilFlow™ microchannel device (MCD) available - 3 and 4 port GC splitters, and a Deans' switch MCD, perfect for multidimensional analyses and comprehensive chromatography.



SilFlow™ GC 3 Port Splitter



SilFlow™ GC 4 Port Splitter



SilFlow™ GC Deans' Switch



SilFlow™ Ferrules and Nut

SilTite™ FingerTite Tool

SilTite™ FingerTite Injector and Detector Ferrules



- The next generation ferrule system for gas chromatography systems (Agilent, Thermo, PerkinElmer, Bruker/Varian and Shimadzu)
- Simplifies GC column installation
- Reduces background noise in sensitive MS applications
- Available in injector / detector or detector only kits

	100 % Graphite	Graphite Vespel®	SilTite™ FingerTIte
Mechanical Strength	Soft	Hard	Hard
Temperature Limit	450 °C	350 °C	No practical limit
Grip strength on column	Soft	Moderate	Strong
Doesn't need retightening after installation	✓	x	✓
Ideal for GC-MS applications (minimal porosity)	x	✓	✓
No tools required for installation and removal	x	x	✓
Permanent positioning of ferrule	x	x / ✓	✓
No deterioration	x	x	✓
Cannot break the capillary column with over-tightening	x	x	✓
No column creep	x	x	✓
Chemically inert	x	x	✓



The SilTite™ FingerTite ferrule requires a unique adapter to enable the finger force connection. Purchase one of the starter kits with the corresponding adapters for your system, complete the one off 5 minute install using the instructions provided, and you are ready to go!

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