

# The Right Connections Make All the Difference

Agilent gas chromatography connection supplies



# Now It's Easier Than Ever to Get Reliable GC Results Through Better GC Connections

Column connections have been a source of frustration and wasted time since the advent of gas chromatography. Simple connections can leak, causing high background noise, damaged GC column stationary phase, questionable results, and wasted time retightening fittings.

You can improve your GC flow path integrity—and lengthen your periods of unattended operation—with easy-to-use, leak-free connections from Agilent. They allow anyone to create reliable connections quickly, while making advanced flow path techniques (such as backflush, retention gaps, and column effluent switching) more routine.

And it all starts with one truly revolutionary innovation...



## The Agilent Self-Tightening column nut eliminates the need for retightening once and for all

This unique, stainless steel GC column nut delivers a tight connection without expensive upgrades or adaptors. It gives you the advantages of:

- Reliable performance. An innovative spring-driven piston continuously presses against the short graphite/polyimide ferrule. So you can maintain a leak-free seal even after hundreds of injections.
- Better stability. New locking collar holds your column in place for accurate column depth and ferrule positioning.
- Less wasted time. There's no need to retighten after repeated thermal cycles.
- Ease of use. Finger-tight design lets anyone in your lab make consistent connections without tools.
- Faster maintenance. The low-torque seal prevents ferrules from sticking or crumbling.

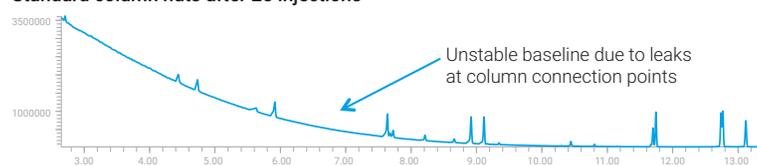
# Will Your Column Connections Withstand the Test of Time?



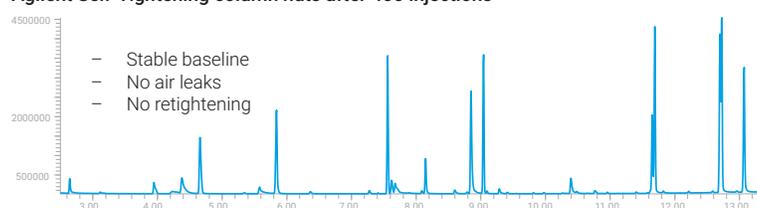
## Compare standard fittings to Agilent Self-Tightening column nuts

Note that even after retightening, air leaks still occurred with the standard fittings. With Agilent Self-Tightening column nuts, leaks were not a problem, even after 400 injections.

Standard column nuts after 25 injections



Agilent Self-Tightening column nuts after 400 injections



## Self-Tightening column nut or UltiMetal ferrule: Which is right for your application?

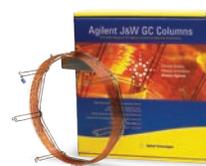
If You Need...	Self-Tightening Column Nut with Graphite/Polyimide Ferrule	UltiMetal Plus Flexible Metal Ferrule	UltiMetal Plus Gold-Plated Flexible Metal Ferrule
Ease of use	✓		
Inertness		✓	
Compatibility with installed or older hardware	✓		
A leak-free seal at high temperatures (above 350 °C)	✓	✓	✓
Connection to capillary flow technology			✓
Pre-swaging connections for precise height into fitting		✓	
Reuse of the ferrule	✓		
MS interface	✓		

Keep in mind that other factors affect the quality and consistency of your data



### Agilent sample preparation products

Eliminate laboratory variability and ensure consistent flow, cleanliness, and recovery.



### Agilent J&W GC columns

Depend on the sharpest peaks, the best inertness, and the tightest column-to-column reproducibility.



### Agilent GC and GC/MS systems combined with OpenLab CDS and MassHunter software

Perform consistent chromatography and keep pace with stringent new methods and demanding sample loads.

# Maintain the Validity of Your Results with Agilent GC Connection Supplies



## 1 Agilent glass-fritted liners

- Ultra Inert inlet liners with sintered glass frit
- Low-frit single taper for splitless analysis of SVOCs and OC/OP pesticides
- Mid-frit single taper split/splitless liners, ideal for basic drugs analysis

## 2 Agilent split/splitless inlet gold seals

- Ultra Inert chemistry combined with gold plating
- Leak-free seal, reduced active analyte adsorption

## 3 Agilent Self-Tightening column nut, inlet/detector

- Leak-free seal, even at high temperatures
- Easy finger-tight design—no retightening
- New locking collar holds your column in place for accurate installation depth and ferrule positioning
- Better flow path integrity through hundreds of cycles
- Available for the inlet and detector

## 4 Agilent Self-Tightening column nut, MSD

- Leak-free seal, even at high temperatures
- Easy finger-tight design—no retightening
- New locking collar holds your column in place for accurate column depth and ferrule positioning
- Less MS column installation time: no need to open the port
- Reduced maintenance requirements and increased confidence in your connection

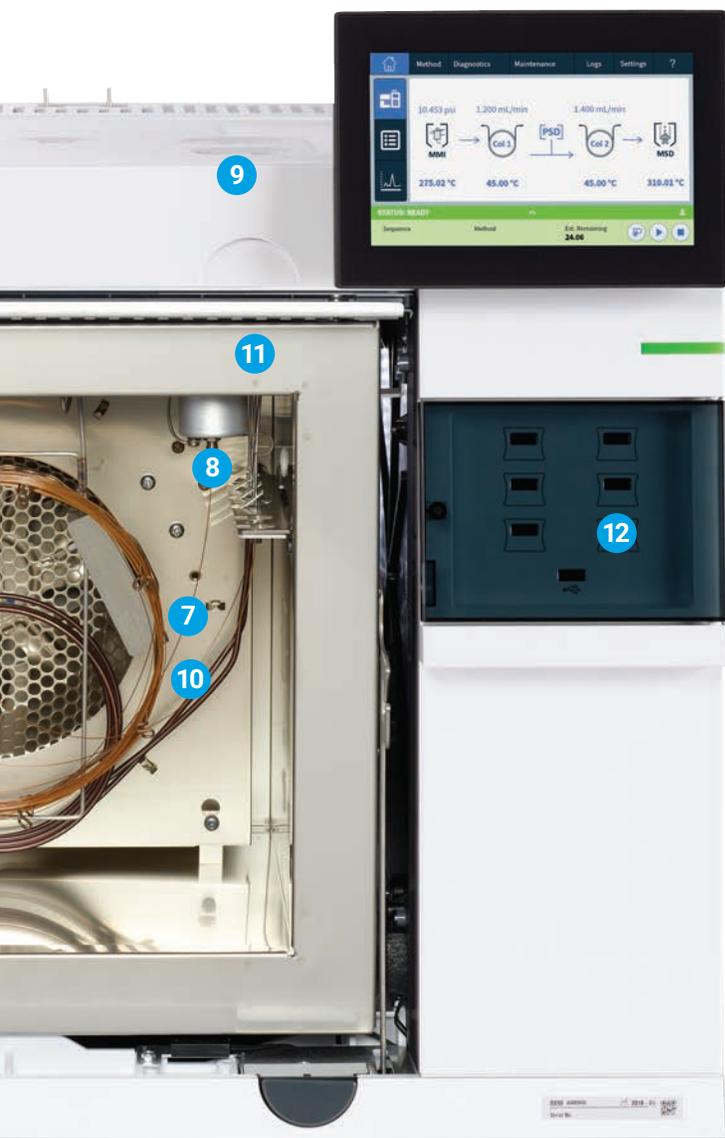
## 5 Agilent GC column installation pre-swaging tool, for graphite or metal ferrules

- Optimized GC performance and reproducibility: ensure a proper length of column into the fittings
- Available for Agilent GC models 8890, 7890, and 6890, and for graphite or metal ferrules

## 6 Agilent UltiMetal Plus deactivated stainless steel transfer lines, capillary tubing, and guard columns

- High inertness





### 7 Agilent UltiMetal Ultimate Union/ UltiMetal Plus tee

- Deactivated with UltiMetal Plus
- Leak-free connection for guard columns or retention gaps
- Longer lasting for greater cost effectiveness
- Completes inert flow path with UltiMetal Plus Flexible Metal ferrules



### 8 Agilent UltiMetal Plus and gold-plated Flexible Metal ferrules

- A proper grip and seal for capillary tubing without overtightening
- Highly inert for your trace-level analysis
- Robust, leak-free column connection
- For customers using CFT, gold-plated ferrules are recommended for consistent leak-free connections



### 9 Agilent UltiMetal Plus deactivated stainless steel tubing and fittings

- Improved peak shapes for active compounds
- Higher GC system inertness and corrosion resistance



### 10 Agilent Ultimate Plus deactivated fused silica

- Specially treated to ensure optimum inertness for guard columns and retention gaps



### 11 Agilent FID/NPD jets

- Easy column installation and jet replacement with less risk of column damage
- Free from thread lubricant, minimizing contamination
- Strong material reduces the risk of deforming, galling, and bending
- Suitable for all GC platforms, as well as capillary column and packed column detector bodies



### 12 Agilent J&W column Smart Key

- Provides information on column use, configuration, age, temperature, and number of injections
- Helps you plan preventive maintenance before issues occur
- Less downtime and better lab productivity
- Compatible with Agilent 8890 GC only



# Ordering Information



## Ultra Inert glass-fritted liners

Description	Part Number
Single taper, universal UI frit, 4 mm, 1/pk	5190-5105
Single taper, universal UI frit, 5/pk	5190-5105-005
Single taper, splitless UI frit, 1/pk	5190-5112
Single taper, splitless UI frit, 5/pk	5190-5112-005

## UltiMetal Plus and gold-plated Flexible Metal ferrules, 10/pk

Description	Part Number
UltiMetal Plus for 0.1 to 0.25 mm columns	G3188-27501
UltiMetal Plus for 0.32 mm columns	G3188-27502
UltiMetal Plus for 0.53 mm columns	G3188-27503
CFT ferrule, flexi, gold 0.25 mm id, column	G2855-28501
CFT ferrule, flexi, gold 0.32 mm id, column	G2855-28502
CFT ferrule, flexi, gold 0.53 mm id, column	G2855-28503
CFT ferrule, flexi, gold UM small	G2855-28505
CFT ferrule, flexi, gold UM large	G2855-28506

## Self-Tightening column nut

Description	Part Number
Column nut, MSD	G3440-81013
Column nut, inlet/detector	G3440-81011
Short graphite/polyimide ferrules	
0.1 to 0.25 mm columns	5181-3323
0.32 mm columns	5062-3514
0.45 to 0.53 mm columns	5062-3512

## Column installation pre-swaging tools

Description	Part Number
Graphite ferrule	G3440-80217
Metal ferrule	G3440-80218

## Split/splitless inlet gold seals

Description	Part Number
GC inlet seal, stainless steel	18740-20880
GC inlet seal, gold plated, with cross	5182-9652
GC inlet seal, gold plated, with washer	5188-5367
GC inlet seal, gold plated, with washer, Ultra Inert	5190-6144
GC inlet seal, gold plated, with washer, 10/pk	5190-2209
GC inlet seal, gold plated, with washer, Ultra Inert, 10/pk	5190-6145
GC inlet seal, gold plated, with washer, Ultra Inert, 50/pk	5190-6149

## UltiMetal Plus Ultimate Union/UltiMetal Plus tee

Description	Part Number
Ultimate Union, deactivated	G3182-61580
Inert tee	G3184-60065
Flexible Metal ferrule, UltiMetal Plus for 0.53 mm columns, 10/pk	G3188-27503

## Ultimate Plus deactivated fused silica

Description	Part Number
FS, Ultimate Plus deact. 0.12 mm x 6 m	CP801206
FS, Ultimate Plus deact. 0.15 mm x 5 m	CP801505
FS, Ultimate Plus deact. 0.15 mm x 10 m	CP801510
FS, Ultimate Plus deact. 0.18 mm x 5 m	CP801805
FS, Ultimate Plus deact. 0.18 mm x 6 m	CP801806
FS, Ultimate Plus deact. 0.18 mm x 10 m	CP801810
FS, Ultimate Plus deact. 0.25 mm x 5 m	CP802505
FS, Ultimate Plus deact. 0.25 mm x 10 m	CP802510
FS, Ultimate Plus deact. 0.25 mm x 30 m	CP802530
FS, Ultimate Plus deact. 0.32 mm x 5 m	CP803205
FS, Ultimate Plus deact. 0.32 mm x 10 m	CP803210
FS, Ultimate Plus deact. 0.32 mm x 30 m	CP803230
FS, Ultimate Plus deact. 0.53 mm x 5 m	CP805305
FS, Ultimate Plus deact. 0.53 mm x 6 m	CP805306
FS, Ultimate Plus deact. 0.53 mm x 10 m	CP805310
FS, Ultimate Plus deact. 0.53 mm x 30 m	CP805330

## Detector jets

Description	Part Number
FID jet, universal fit, 0.011 inch id	<a href="#">5200-0176</a>
FID jet, universal fit, 0.018 inch id	<a href="#">5200-0177</a>
FID jet, universal fit, 0.030 inch id	<a href="#">5200-0178</a>
NPD jet, universal fit, 0.011 inch id	<a href="#">5200-0179</a>

## UltiMetal Plus deactivated stainless steel tubing and fittings

Description	Quantity	Part Number
1/16" x 1.0 mm UltiMetal Plus tubing, 10 m	1	<a href="#">5190-6983</a>
1/8" x 2.1 mm UltiMetal Plus tubing, 10 m	1	<a href="#">5190-6984</a>
1/16" UltiMetal Plus nuts, front and back ferrule set	1 set	<a href="#">5190-6986</a>
1/8" UltiMetal Plus nuts, front and back ferrule set	1 set	<a href="#">5190-6987</a>
1/4" UltiMetal Plus nuts, front and back ferrule set	20/pk	<a href="#">5190-6988</a>
1/16" UltiMetal Plus tee	1	<a href="#">5190-6989</a>
1/8" UltiMetal Plus tee	1	<a href="#">5190-6990</a>
1/16" UltiMetal Plus Union	1	<a href="#">5190-6992</a>
1/8" UltiMetal Plus Union	1	<a href="#">5190-6993</a>
1/16" Inert tube 0.031 id x 560 mm	1	<a href="#">5190-6951</a>
1/16" Inert Valco nut	10/pk	<a href="#">5190-6949</a>
1/16" Inert SS tee	1	<a href="#">5190-6953</a>
1/16" Inert SS Union	1	<a href="#">5190-6952</a>
1/16" Inert Valco ferrule	10/pk	<a href="#">5190-6950</a>

## UltiMetal Plus deactivated stainless steel transfer lines, capillary tubing, and guard columns

Product Type	Description	Part Number
Transfer line 1/16" od	UltiMetal Plus transfer line 2 m x 0.25 mm id	<a href="#">CP6571</a>
	UltiMetal Plus transfer line 10 m x 0.25 mm id	<a href="#">CP6572</a>
	UltiMetal Plus transfer line 2 m x 0.75 mm id	<a href="#">CP6573</a>
	UltiMetal Plus transfer line 10 m x 0.75 mm id	<a href="#">CP6574</a>
Guard columns	UltiMetal Plus guard column 2 m x 0.25 mm	<a href="#">CP6575</a>
	UltiMetal Plus guard column 2 m x 0.53 mm	<a href="#">CP6576</a>
	UltiMetal Plus guard column 5 m x 0.53 mm	<a href="#">CP6577</a>
	UltiMetal Plus guard column 10 m x 0.53 mm	<a href="#">CP6578</a>
Tubing	UltiMetal Plus tubing 50 m x 0.25 mm id	<a href="#">CP6579</a>
	UltiMetal Plus tubing 50 m x 0.32 mm id	<a href="#">CP6580</a>
	UltiMetal Plus tubing 50 m x 0.53 mm id	<a href="#">CP6581</a>

## Agilent CrossLab services

CrossLab is an Agilent capability that integrates services and consumables to support workflow success and important outcomes like improved productivity and operational efficiency. Through CrossLab, Agilent strives to provide insight in every interaction to help you achieve your goals. CrossLab offers method optimization, flexible service plans, and training for all skill levels. We have many other products and services to help you manage your instruments and your lab for best performance.

Learn more about Agilent CrossLab, and see examples of insight that leads to great outcomes, at [www.agilent.com/crosslab](http://www.agilent.com/crosslab)



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