

## Choose for Your Instrument



### GC Supplies - Shimadzu Instrument Quick Pick Guide

- Syringes
- Septa
- Inlet Liners
- O-rings and Sealing Rings
- SilTite® FingerTite Ferrules
- Ferrules
- Replacement Parts

Your chromatography analysis does not end with the selection of the GC column. The combination of components selected for your instrument also make an important contribution to successful separations. SGE brings technology and chromatography expertise to improve your chromatography.

## SGE Supplies for Sample Preparation, Sample Introduction, and Separation

### SAMPLE INTRODUCTION - Syringes

Our involvement in all areas of chromatography provides us with a unique understanding of your requirements enabling us to optimize syringe design for sample introduction.

All our syringes, both manual and autosampler, incorporate SGE's Diamond Syringe Technology offering significantly improved levels of durability, clarity and accuracy. SGE has a comprehensive range of syringe options including plunger protection, removable or fixed needles, a range of needle gauge and length options as well as needle-tip style alternatives.

### SAMPLE INTRODUCTION – GC Inlet Liners

The GC Inlet liner is where the sample is introduced and vaporized into the gaseous phase. The design of the liner is crucial, as is liner deactivation, to ensure reproducible and accurate chromatography.

### SEPARATION - GC Connections (ferrules and fittings)

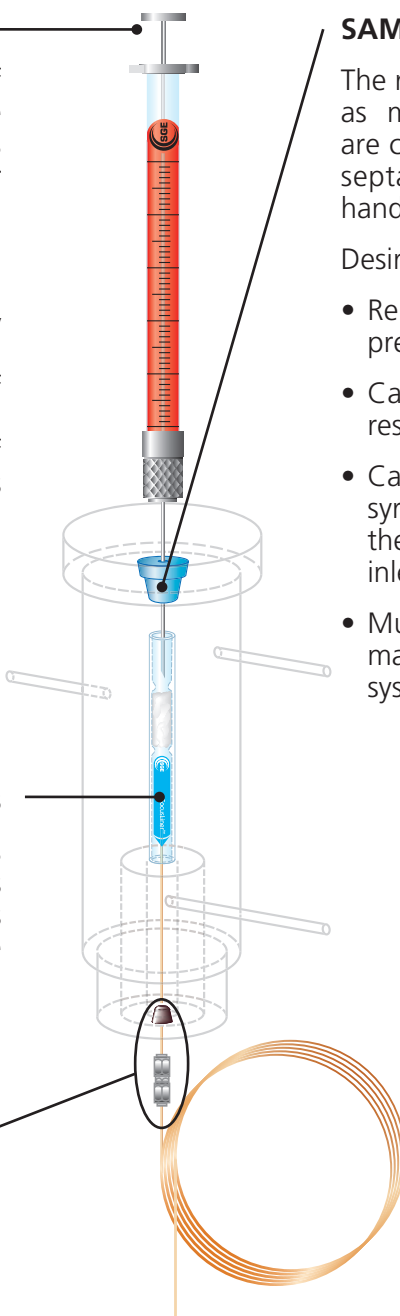
SGE manufactures an array of connection types for GC use. Poorly defined or selected connections can lead to an increase in dead volume, leaks from cycled temperatures and mismatched tubing sizes.

### SAMPLE INTRODUCTION - Septa

The role of septa for GC analysis is key as many chromatographic problems are caused as a result of inappropriate septa material or inappropriate handling of the septa.

Desired septa attributes:

- Reliably seal against the carrier gas pressure in the inlet.
- Capable of being pierced and resealed time after time.
- Capable of being pierced by the syringe needle without pieces of the septa being deposited in the GC inlet system.
- Must not contaminate or bleed material into the chromatographic system.



# Instrument Quick Pick for Shimadzu

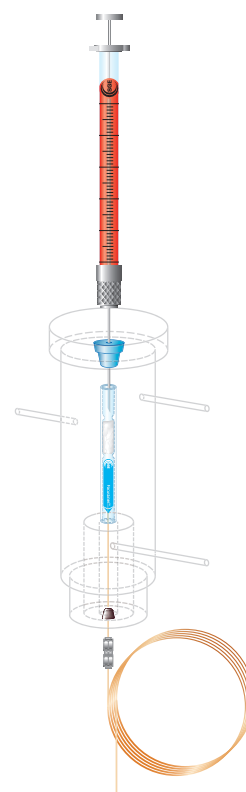
## Autosampler Syringes

All needles are 42 mm long with a cone point style.

Shimadzu AOC14, AOC17 and AOC20

Volume	Needle Gauge (OD mm)	Syringe Code	Syringe Part No.	Pack Size	Spare Needle Part No.	Pack Size	Spare Plunger Part No.	Pack Size
<b>Fixed Needle</b>								
5 µL	23 (0.63)	5F-S-0.63C	001988	1	–	–	–	
<b>Removable Needle</b>								
0.5 µL	26 (0.47)	0.5BR-S-0.47C	000440	1	033738	1*	–	–
0.5 µL	23 (0.63)	0.5BR-S-0.63C	000445	1	033745	1*	–	–
10 µL	26 (0.47)	10R-S-0.47C	002897	1	037745	2	–	–
10 µL	23 (0.63)	10R-S-0.63C	002898	1	037747	2	–	–
10 µL Gas Tight	23 (0.63)	10R-S-GT-0.63C	002902	1	037747	2	031798	2

\*Denotes spare Needle and Plunger kit.



## Septa

SGE has a number of different septa materials:

- Enduro Blue = For non-demanding routine applications.
- EC = Combines significantly longer injection life, low bleed and low injection port adhesion.
- HT = Bleed and temperature optimized, combined with outstanding mechanical properties.

Type	Material	Durability	Resealing	Solvent Resistance	Tear Resistance	Maximum Temperature
Enduro Blue	High Temperature Silicone	Excellent	Excellent	Excellent	Excellent	350 °C
EC	High Temperature Silicone	Excellent	Excellent	Excellent	Excellent	400 °C
HT	BTO Silicone	Excellent	Excellent	Excellent	Excellent	400 °C



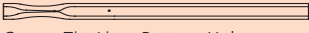


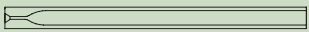

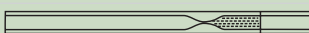
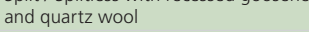
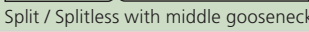
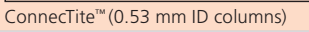
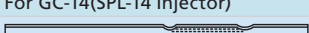
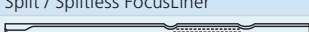
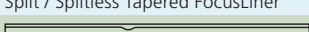

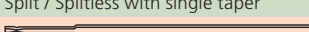
Septum Type	Pack Size	Part No.
<b>For Shimadzu 9A, 14, 15A, 16, 17A, 2010 &amp; 2014</b>		
Enduro Blue	50	041890
EC	50	041905
HT	50	041895

## Inlet Liners

Description and Geometry Sketch	OD (mm)	ID (mm)	Length (mm)	Pack Size	Part No.
<b>For GC-2010 (SPL-2010 Injector), GC-2014 (SPL-2014 Injector) and GC-17A (SPL-17 Injector)</b>					
Split / Splitless FocusLiner™ *	5	3.4	95	5	092059
Split / Splitless Tapered FocusLiner™ *	5	3.4	95	5	092058
Split / Splitless FocusLiner™	5	3.4	95	5	092062
Split / Splitless Tapered FocusLiner™	5	3.4	95	5	092068



## Inlet Liners Continued

Description and Geometry Sketch	OD (mm)	ID (mm)	Length (mm)	Pack Size	Part No.
 ConnectTite Liner Standard	5	3.4	95	5	092329
 ConnectTite Liner Top Hole	5	3.4	95	5	092330
 ConnectTite Liner Bottom Hole	5	3.4	95	5	092331
 Split, straight-through liner	5	3.4	95	5	092064
 Splitless straight-through liner	5	2.6	95	5	0920861
 Split / Splitless with Single Taper	5	3.4	95	5	092071
 Split / Splitless with middle gooseneck	5	3.4	95	5	092077
 Split / Splitless with recessed gooseneck and quartz wool	5	3.4	95	5	092061
 Split / Splitless with middle gooseneck	5	3.4	95	5	092085
 ConnectTite™ (0.53 mm ID columns)	5	2.6	95	5	092087
 SPME Liner	5	0.75	95	5	092089
<b>For GC-14(SPL-14 Injector)</b>					
 Split / Splitless FocusLiner™	5	3.4	99	5	092065
 Split / Splitless Tapered FocusLiner™	5	3.4	99	5	092066
 Split / Splitless with 2.0 mm middle gooseneck	5	3.4	99	5	092082
 Split / Splitless with single taper	5	3.4	99	5	0920831
 Splitless, Direct, wide bore liner for Shimadzu 9A/16A GC	5	3.4	139	5	092084

- Taper / Gooseneck
- FocusLiner™
- Taper Focus
- ConnectTite
- Straight
- Double Taper
- PTV/LVI

\* When using a standard 42 mm needle for autosamplers, the sample will be injected on top of the wool for this liner.

## O-rings and Sealing Rings

Description	Usage	Pack Size	Part No.
Viton O-ring	Can be used at temperatures up to 300 °C. For 2010 & 2014 (SPL-2010 Injector & SPL-2014 Injector).	10	0726533
Graphite Sealing Ring	Can be used at temperatures up to 450 °C. For 14, 15A & 16 (SPL-14 injector).	10	0726001
Graphite Sealing Ring	Can be used at temperatures up to 450 °C. For 17A (SPL-17 injector).	10	0726007

## SilTite® FingerTite Ferrules



Description	Pack Size	Part No.
SilTite Fingertite Shimadzu 2010 INJ / FID Starter Kit	*	073620
SilTite Fingertite Shimadzu 2010 INJ / MS Starter Kit	*	073621
SilTite Fingertite Ferrule 0.4 mm	10 Replacement Items	073630
SilTite Fingertite Ferrule 0.5 mm	10 Replacement Items	073631
SilTite Fingertite Blanking Ferrule	2 Replacement Items	073633
SilTite Fingertite Female Nut	5 Replacement Items	073636

\* Each starter kit includes all the parts necessary to convert one GC system (one injector and one detector) to the SilTite FingerTite system suitable for installing 0.1 – 0.25 mm ID capillary columns. In addition there are five SilTite FingerTite nuts, one packet (ten ferrules) of 0.4 mm ID SilTite FingerTite ferrules and a ferrule install tool which allows you to seat the ferrule in the correct position on the capillary column.

## Ferrules

Column ID	Description	Pack Size	Part No.
<b>GC14A, GC17A, GC2010 and GC2014 Detector / Injectors (Not for MS interfaces or QP2010 Injector)</b>			
0.10-0.32 mm ID columns	100% Graphite	10	0726080
0.45-0.53 mm ID columns	100% Graphite	10	0726082
5 mm OD packed columns	100% Graphite	10	0726001
0.10-0.25 mm ID columns	SilTite Metal - Initial Installation	10*	073350
0.10-0.25 mm ID columns	SilTite Ferrules	10	073227
0.32 mm ID columns	SilTite Metal - Initial Installation	10*	073351
0.32 mm ID columns	SilTite Ferrules	10	073228
0.45-0.53 mm ID columns	SilTite Metal - Initial Installation	10*	073352
0.53 mm ID columns	SilTite Ferrules	10	073229
n/a	SilTite Metal Nuts - Slotted	5	073232
<b>QP5000/5050 Standard MS Interface</b>			
QP5000-I 0.10-0.25 mm ID columns	15% Graphite/ 85% Vespel® Ferrules	10	0726563
QP5000-I 0.32 mm ID columns	15% Graphite/ 85% Vespel® Ferrules	10	0726564
QP5000-II & QP5050 0.10-0.25 mm ID columns	15% Graphite/ 85% Vespel® Ferrules	10	0726561
QP5000-II & QP5050 0.32 mm ID columns	15% Graphite/ 85% Vespel® Ferrules	10	0726562
0.10-0.25 mm ID columns	SilTite Metal - Initial Installation	10*	073204
0.10-0.25 mm ID columns	SilTite Ferrules	10	073227
0.32 mm ID columns	SilTite Metal - Initial Installation	10*	073205
0.32 mm ID columns	SilTite Ferrules	10	073228
0.53 mm ID columns	SilTite Ferrules	10	073229
n/a	SilTite Metal Nuts-QP5000/5050 Standard MS interface	5	073233
<b>QP5000/5050 Wide Bore MS Interface, QP2010 Injector and QP2010 Standard MS Interface</b>			
0.10-0.25 mm ID columns	15% Graphite/ 85% Vespel® Ferrules	10	072663
0.32 mm ID columns	15% Graphite/ 85% Vespel® Ferrules	10	072654
0.45-0.53 mm ID columns	15% Graphite/ 85% Vespel® Ferrules	10	072655
0.10-0.25 mm ID columns	SilTite Metal - Initial Installation	10*	073200
0.10-0.25 mm ID columns	SilTite Ferrules	10	073220
0.32 mm ID columns	SilTite Metal - Initial Installation	10*	073201
0.32 mm ID columns	SilTite Ferrules	10	073221
0.45-0.53 mm ID columns	SilTite Metal - Initial Installation	10*	073202
0.45-0.53 mm ID columns	SilTite Ferrules	10	073222
n/a	SilTite Metal Nuts	5	073224

\* Includes ten ferrules, two SilTite nuts.

## Replacement Parts

Material	Pack Size	Part No.
<b>Replacement SilTite Nuts</b>		
For 2010 GC-MS System	5	073224
For 2010 GC-MS System with QP5000 series MS	5	073224
For 2010/2014 GC Injectors and atmospheric detectors	5	073224
QP5000 Jet Separator MS Interface	5	073224
QP5000 Direct MS Interface	5	073233
For All Injectors Jet Separator (Starter Kit), except 2010/2014	5	073232

SGE's involvement in gas chromatography includes the support we give to our customers.

### **Technical Support**

Contact us at [techsupport@sge.com](mailto:techsupport@sge.com) for technical support information.

### **Our Website**

[www.sge.com](http://www.sge.com) is a detailed source for information on chromatography, applications and SGE products. It also profiles the latest posters and materials developed by our technical experts based around the world.

### **SGE Product Selection Guide**

Our product selection guide can be accessed at [www.sge.com/selectionguide](http://www.sge.com/selectionguide)

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