

Ferrules

SGE's range of Ferrules & Sealing Rings

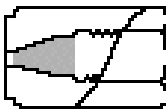
Ferrule Styles



GFF ferrules

100% Graphite, Front Ferrule (GFF)

- Maximum Temperature 450°C
- In combination with a back ferrule can be used with Swagelok™ fittings
- Used alone with SGE SSN (short style) nuts
- Used with HP capillary connecting nuts



Extended Stainless Steel Nut (SSNE) uses VFF, OGF and GVF ferrules



OGF ferrules

100% Graphite, combination Front and Back Ferrule (OGF)

- Maximum Temperature 450°C
- Can be used without back ferrule with Swagelok™ or Parker Hannifin fittings
- Used with SGE SSNE (long style) nuts
- Mini OGF ferrule for use with SGE mini unions (MOGF).



MOGF ferrules



GVF ferrules

15% Graphite/85% Vespel, combination Front and Back Ferrule (GVF)

- Maximum Temperature 350°C
- Can be used without back ferrule with Swagelok™ or Parker Hannifin fittings.
- Used with SGE SSNE (long style) nuts and capillary unions for mass spectrometry and general capillary work
- Shortened style GVFS ferrules for use with Hewlett Packard capillary fittings
- Mini GVF ferrules for use with SGE mini unions (MGVF).



VFF ferrules

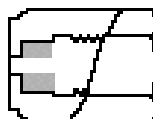
Natural Vespel, combination Front and Back Ferrule (VFF)

- Maximum Temperature 280°C
- Can be used without back ferrule with Swagelok™ or Parker Hannifin fittings.
- Used with SGE SSNE (long style) nuts and capillary unions for mass spectrometry and general capillary work. Shows high shrinkage.

Sealing Ring Styles



GSR, VSR and PSR sealing rings



Stainless Steel Nut (SSN) uses GFF ferrules and VSR, PSR & ESR sealing rings

100% Graphite Sealing Rings (GSR)

- Selected applications

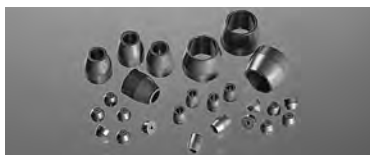
15% Graphite/85% Vespel Sealing Rings (VSR)


- Used with SGE short nuts and fittings


PTFE Sealing Rings (PSR)


- Used with SGE short SSN nuts and fittings up to 200°C


Ferrules recommended for specified instruments

Description	Ferrule ID	Ferrule Code	Pack Size	Ferrule Part No.
Perkin Elmer				
				
Column Connection - 15% Graphite - 85% Vespel ferrules				
For 1/16" Nut, 0.1-0.18mm ID Columns	0.3mm	GVF16-003	10	072659
For 1/16" Nut, 0.22-0.25mm ID Columns	0.4mm	GVF16-004	10	072663
For 1/16" Nut, 0.32mm ID Columns	0.5mm	GVF16-005	10	072654
For 1/16" Nut, 0.45-0.53mm ID Columns	0.8mm	GVF16-008	10	072655
For 1/8" Nut, 0.22-0.25mm ID Columns	0.4mm	GVF8-004	10	0726703
For 1/8" Nut, 0.32mm ID Columns	0.5mm	GVF8-005	10	0726702
For 1/8" Nut, 0.45-0.53mm ID Columns	0.8mm	GVF8-008	10	072671
For 1/8" OD Packed Columns	1/8"	GVF8-8	10	072669
For 1/4" OD Packed Columns	1/4"	GVF4-4	10	072667
Column Connection - 100% Graphite ferrules				
For 1/16" Nut, 0.22-0.32mm ID Columns	0.5mm	OGF16-005	10	072627
For 1/16" Nut, 0.45-0.53mm ID Columns	0.8mm	OGF16-008	10	072626
For 1/4" Nut, 1/4" OD Packed Columns	1/4"	OGF4-4	10	072621
For 1/8" Nut, 0.22-0.32mm ID Columns	0.5mm	OGF8-PE-005	10	072624
For 1/8" Nut, 0.45-0.53mm ID Columns	1mm	OGF-PE-010	10	0726280
For 1/8" Nut, 1/8" OD Packed Columns	1/8"	OGF8-8	10	072622
Special Connection	2.0mm	GFF-PE-020	10	0726153
Special Connection	3.0mm	GFF-PE-030	10	072616

Description	Ferrule ID	Ferrule Code	Pack Size	Ferrule Part No.
Hewlett Packard				
				
Column Connection - 15% Graphite- 85% Vespel ferrules for all injectors and detectors except GC/MS interfaces				
For 0.1-0.15mm ID Columns	0.3mm	GVFS16-003	10	073107
For 0.2-0.25mm ID Columns	0.4mm	GVFS16-004	10	073109
For 0.32mm ID Columns	0.5mm	GVFS16-005	10	073111
For 0.45-0.53mm ID Columns	0.8mm	GVFS16-008	10	073113
For 1/8" OD Packed columns	1/8"	GVF8-8	10	072669
For 1/4" OD Packed columns	1/4"	GVF4-4	10	072667
Column Connection - 100% Graphite ferrules for all injectors and detectors except GC/MS interfaces				
For 0.1-0.32mm ID Columns	0.5mm	GFF16-005	10	072610
For 0.45-0.53mm ID Columns	1.0mm	GFF16-010	10	072607
For 1/8" OD Packed Columns	1/8"	GFF8-8	10	072602
For 1/4" OD Packed Columns	1/4"	GFF4-4	10	072601
GC/MS Column Connection - 15% Graphite- 85% Vespel ferrules for capillary GC/MS direct or open-split interfaces				
For 0.1-0.15mm ID Columns	0.3mm	GVF16-003	10	072659
For 0.20-0.25mm ID Columns	0.4mm	GVF16-004	10	072663
For 0.32mm ID Columns	0.5mm	GVF16-005	10	072654
For 0.45-0.53mm ID Columns	0.8mm	GVF16-008	10	072655

Description	Ferrule ID	Ferrule Code	Pack Size	Ferrule Part No.
Shimadzu				
				
* denotes "captured ferrules"				
Column Connection - 100% Graphite ferrules				
For 0.22-0.32mm ID Columns*	0.5mm	GFS-005	10	0726080
For 0.45-0.53mm ID Columns*	0.8mm	GFS-008	10	0726082
For 5mm OD Packed Columns*	5mm	GI-5S	10	0726001
GC/MS Connection - 15% Graphite - 85% Vespel ferrules				
For QP5000 MS with 0.53mm ID Columns	0.8mm	GVS-I-008	10	0726555
For QP5000-II MS with 0.1-0.15mm ID Column	0.3mm	GVS-II-003	10	0726560
For QP5000-II MS with 0.22-0.25mm ID Columns	0.4mm	GVS-II-004	10	0726561
For QP5000-II MS with 0.32mm ID Columns	0.5mm	GVS-II-005	10	0726562
For QP5000-II MS with 0.53mm ID Columns	0.8mm	GVS-II-008	10	0726547

Description	Ferrule ID	Ferrule Code	Pack Size	Ferrule Part No.
Carlo Erba/Fisons				
				
15% Graphite - 85% Vespel ferrules -not suitable for 8000 series GC				
For 0.22-0.25mm ID Columns	0.4mm	GVF-CE-004	10	0726549
For 0.32mm ID Columns	0.5mm	GVF-CE-005	10	0726557
For 0.45-0.53mm ID Columns	0.7mm	GVF-CE-007	10	0726548
For 1/8" OD Packed Columns	1/8"	GVF8-8	10	072669
For 1/4" OD Packed Columns	1/4"	GVF4-4	10	072667
100% Graphite ferrules -not suitable for 8000 series GC				
For 0.22-0.32mm ID Columns	0.5mm	GFF-CE-005	10	072619
For 0.53mm ID Columns	0.8mm	GFF-CE-008	10	072614
For 1/8" OD Packed Columns	1/8"	OGF8-8	10	072622
For 1/4" OD Packed Columns	1/4"	OGF4-4	10	072621
Low Cost Capillary Conversion Nut Kit and Ferrules for CE/Fisons 8000				
Supplied with range of ferrules for 0.15-0.53mm ID Columns			1	103436

Description	Ferrule ID	Ferrule Code	Pack Size	Ferrule Part No.
Varian				
				
Column Connection - 15% Graphite - 85% Vespel ferrules				
For 0.1-0.18mm ID Columns	0.3mm	GVF16-003	10	072659
For 0.22-0.25mm ID Columns	0.4mm	GVF16-004	10	072663
For 0.32mm ID Columns	0.5mm	GVF16-005	10	072654
For 0.45-0.53mm ID Columns	0.8mm	GVF16-008	10	072655
For 1/8" OD Packed Columns	1/8"	GVF8-8	10	072669
For 1/4" OD Packed Columns	1/4"	GVF4-4	10	072667
Column Connection - 100% Graphite ferrules				
For 0.22-0.32mm ID Columns	0.5mm	OGF16-005	10	072627
For 0.45-0.53mm ID Columns	0.8mm	OGF16-008	10	072626
For 1/8" OD Packed Columns	1/8"	OGF8-8	10	072622
For 1/4" OD Packed Columns	1/4"	OGF4-4	10	072621

General Ferrules - All ferrules supplied in packets of 10

Tube type/Application	Ferrule ID	MOGF Style 100% Graphite		MGVF Style Graphite/Vespel	
		Ferrule Code	Ferrule Part No.	Ferrule Code	Ferrule Part No.
SGE Mini Union Ferrules					
Coupling Capillary Columns	0.3mm			MGVF-003	072695
Coupling Capillary Columns	0.4mm			MGVF-004	072696
Coupling Capillary Columns	0.5mm	MOGF-005	072630	MGVF-005	072697
Coupling Capillary Columns	0.8mm	MOGF-008	072629	MGVF-008	072698
Glass, S/Steel, GLT	1/16"			MGVF-16	072693
No Hole	0mm			MGVF-000	072694

Fitting Size	Ferrule ID	VSR Style Graphite/Vespel		PTFE Style		GSR Style	
		Code	Part No.	Code	PTFE Part No.	Code	Graphite Part No.
1/16"	1/16"	VSR16-16	072653	PSR16-16	072650	GSR16-16	0726520
1/8"	1/8"	VSR8-8	072652				
1/4"	1/4"	VSR4-4	072651			GSR4-4	0726003

Fitting Size	Tube type/Application	100% Vespel		VFF Style	
		Ferrule ID		Ferrule Code	Ferrule Part No.
1/4"	No Hole	0mm		VFF4-000	072681
1/4"	Glass, S/Steel, GLT	6mm		VFF4-060	0726812
1/4"	Glass, S/Steel, GLT	1/16"		VFF4-16	0726814
1/8"	No Hole	0mm		VFF8-000	0726823
1/8"	Glass, S/Steel, GLT	1/16"		VFF8-16	0726821
1/16"	No Hole	0mm		VFF16-000	0726841
*1/16"	Glass, S/Steel, GLT	1/16"		VFF16-16	072684

Fitting Size	Tube type/Application	Ferrule ID	GFF Style 100% Graphite		OGF Style 100% Graphite		GVF Style Graphite/Vespel	
			Code	Part No.	Code	Part No.	Code	Part No.
General Ferrules								
For 1/16" Fittings (Standard)								
1/16"	Capillary Connection	0.2mm					GVF16-002	0726632
1/16"	Capillary Connection	0.3mm					GVF16-003	072659
1/16"	Capillary Connection	0.4mm					GVF16-004	072663
1/16"	Capillary Connection	0.5mm	GFF16-005	072610	OGF16-005	072627	GVF16-005	072654
1/16"	Capillary Connection	0.8mm	GFF16-008	072608	OGF16-008	072626	GVF16-008	072655
1/16"	Glass, S/Steel	0.9mm					GVF16-009	072658
1/16"	Glass, S/Steel	1.0mm	GFF16-010	072607	OGF16-010	072625	GVF16-010	072656
1/16"	Glass, S/Steel	1.2mm	GFF16-012	072606				
1/16"	Glass, S/Steel, GLT	1/16"	GFF16-16	072603	OGF16-16	072623	GVF16-16	072657

For 1/16" Fittings (Special)								
1/16"	No Hole (outlet block)	0mm					GVF16-000	072661
HP-1/16"	HP Capillary Connection	0.3mm					GVFS16-003	073107
HP-1/16"	HP Capillary Connection	0.4mm					GVFS16-004	073109
HP-1/16"	HP Capillary Connection	0.5mm					GVFS16-005	073111
HP-1/16"	HP Capillary Connection	0.8mm					GVFS16-008	073113
1/16"	2 Hole (splitter)	0.3mm					GVF16(2)-003	072660
1/16"	2 Hole (splitter)	0.4mm					GVF16(2)-004	072662
1/16"	2 Hole (splitter)	0.5mm					GVF16(2)-005	072664
1/16"	2 Hole (splitter)	0.5mm,0.3mm					GVF16(2)-005-003	0726640
1/16"	2 Hole (splitter)	0.4mm,0.3mm					GVF16(2)-004-003	0726641
1/16"	3 Hole (splitter)	0.4mm					GVF16(3)-004	072665

*Use with conductivity detectors

General Ferrules - All ferrules supplied in packets of 10

Fitting			GFF Style 100% Graphite		OGF Style 100% Graphite		GVF Style Graphite/Vespel	
Size	Tube type/Application	Ferrule ID	Code	Part No.	Code	Part No.	Code	Part No.
General Ferrules								
For 1/8" Fittings (Standard)								
1/8"	Capillary Connection	0.5mm			OGF-PE-005	072624	GVF8-005	0726702
1/8"	Capillary Connection	0.8mm			OGF8-008	0726270	GVF8-008	072671
1/8"	Capillary Connection	1.0mm			OGF-PE-010	0726280		
1/8"	Glass, S/Steel, Capillary	1.2mm	GFF8-012	072609	OGF8-012	072628		
1/8"	Glass, S/Steel, GLT	1/16"	GFF8-16	0726090	OGF8-16	0726283	GVF8-16	0726701
1/8"	Glass, S/Steel	2.4mm					GVF8-024	0726700
1/8"	Glass, S/Steel	1/8"	GFF8-8	072602	OGF8-8	072622	GVF8-8	072669
For 1/8" Fittings (Special)								
1/8"	No Hole (outlet block)	0mm					GVF8-000	072670
1/8"	2 Hole (Splitter)	0.5mm					GVF8(2)-005	072672
1/8"	2 Hole (Splitter)	0.8mm					GVF8(2)-008	072674
For 5mm Fittings								
5mm	Fused Silica, SS, Glass	1.2mm	GFF05-012	072612				
5mm	Fused Silica, SS, Glass	5.0mm	GFF05-050	072605				
For 1/4" Fittings (Standard)								
1/4"	S/Steel, Glass	6.0mm	GFF4-060	072604			GVF4-060	0726673
1/4"	S/Steel, Glass, GLT	1/16"			OGF4-16	0726282	GVF4-16	072673
1/4"	S/Steel, Glass, GLT	1/8"	GFF4-8	0726151	OGF4-8	0726281	GVF4-8	072668
1/4"	S/Steel, Glass, GLT	1/4"	GFF4-4	072601	OGF4-4	072621	GVF4-4	072667
1/4"	Glass, S/Steel	5/16"	GFF4-5/16	072617				
1/4"	No Hole (outlet block)						GVF4-000	072666
For Misc. Fittings (Special)								
3/8"	Glass, S/Steel	3/8"	GFF3-3/8	072615				
1/2"	Glass, S/Steel	1/2"	GFF2-2	072613				



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