

# D44 GC Ferrules & Sealing Rings

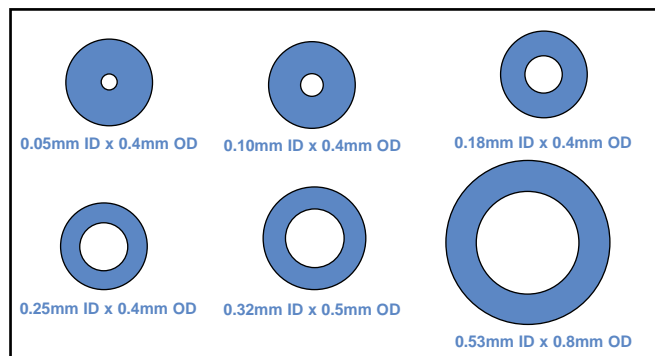
## Ferrules For Gas Chromatographs

A wide variety of materials are utilized for ferrules for use on gas chromatographs. The chromatographer must determine the type of ferrule to use based on the properties of the ferrule material and the chromatography conditions.

Scientific Instrument Services™ provides a wide selection of ferrules manufactured by SGE and S.I.S.

A summary table of the properties of each type of ferrule appears below:

Dimensions of fused silica capillary columns (I.D. vs O.D.) for selection of ferrules



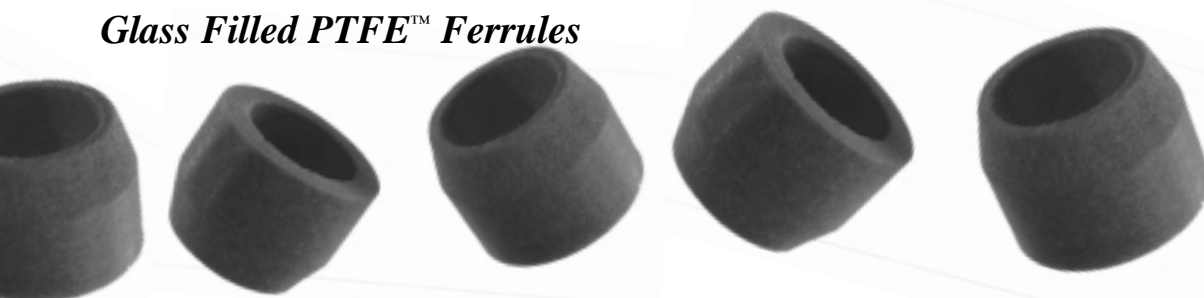
Material	Temp. Limit	Sealing Properties	Strength	Reusability	Temp. Cycle
Graphite	450°C	Excellent	Poor	Good	Excellent
Graphitized Vespel	300°C	Good	Excellent	Excellent	Excellent
Vespel™	350°C	Good	Excellent	Excellent	Excellent
PTFE™	250°C	Excellent	Fair	Good	Poor
Glass-Filled PTFE	250°C	Excellent	Fair	Good	Fair
Silicone 'O' Rings	230°C	Good	Fair	Poor	Fair

1. Graphitized Vespel may shrink and loosen at subambient temperatures.
2. Graphitized Vespel will expand and shrink with changing temperature. Connections should be retightened a few times when first installed until the ferrule has settled.
3. Function of ferrule cross sectional area. (1/16"

4. Function of ferrule cross sectional area.
5. Graphite absorbs organics. Avoid contact with flow path.
6. Small amounts of graphite can enter capillary tubing during installation. Remove the first 2-3cm of tubing

7. Due to the hardness of graphitized vespel the ferrule should be closely matched to the tubing OD to obtain a good seal.
8. Graphitized Vespel ferrules can sometimes be reused, but normally will seize.

## Glass Filled PTFE™ Ferrules



- Recommended for use on Glass Jet Separators on Mass Spectrometers
- Also Recommended for Glass GC Columns
- Maintains the Sealing Properties of PTFE, but unlike PTFE, Exhibits Less Flow at High Temperature
- Does Not Flake Off Like Graphite to Clog Jets
- Maximum Usable Temperature is 250°C
- Two Styles Available; Type GTF Requires A Back Ferrule, Type OTF Does Not
- Will Not Stick to Metal or Glass

These ferrules are constructed from glass filled PTFE, giving the ferrules the sealing properties of PTFE but minimizing the flow problems normally encountered with pure PTFE. All

ferrules fit the standard Swagelok, Parker, SGE and other GC fittings. Glass filled PTFE ferrules are ideal for use on mass spectrometer jet separators, glass and metal GC columns and for glass and fused silica capillary columns.

Part No.	Needs Back Ferrule	Size I.D.	Quant./pkg.	Price / pkg*
GTF4-10	Yes	1/4"	10	
OTF4-10	No	1/4"	10	
OTF8-10	No	1/8"	10	
OTF16-10	No	1/16"	10	
OTF005	No	0.5mm	10	
OTF008	No	0.8mm	10	
OTF10	No	1.0mm	10	
OTF000	No	No Hole	10	

\*10% discount when purchasing 10 or more packages.