

New Teide™ Ferrules for Gas Chromatography Tk



Ferrules for Gas Chromatography

Ferrules for gas chromatography are used to seal the connections between the column and the injection and detection systems.

The ideal GC column ferrules provide a perfect seal avoiding leaks that would let the entrance of air and contaminants into the equipment, damage the baseline and increase the background signal.

Ferrules must not stick to the column and must tolerate temperature changes during programming.

Ferrule selection

General considerations in the ferrule selection:

- Injector temperature
- Type and sensitivity of the detector
- Type of material that provides a perfect seal to avoid leaks

How to avoid problems with ferrules

- Change the ferrules on installing a new column
- Avoid all type of fingers' grease and other contaminants
- Do not overtighten the ferrules. As a general rule, seals at ¼ turn past fingertight are enough.
- Observe if the reusable ferrules are damaged before using them again.

When is it necessary to change the ferrules

- When some changes are observed in retention times
- In case of baseline drift caused by the entrance of oxygen and possible reaction with the stationary phase
- When sample loss is observed
- Increase of the detector background signal

Types of Ferrules

Graphite

Graphite is the best material to work at high temperature and at the same time is the softest ferrule. Therefore it fits the capillary column and seals effectively at only ¼ turn past fingertight. As this is a very soft material, there are easily destroyed or deformed. Ideal for FID and NPD detectors.

Do not use with MS or other oxygen sensitive detectors. Upper temperature limit 450°C.

Vespel/Graphite

Vespel /Graphite ferrules are recommended for applications with GC/MS interface or other oxygen sensitive detectors.

The ferrule composition is 60% polyimide and 40% graphite. It is a ferrule for general use in Gas Chromatography.

It is mechanically robust and forms a perfect seal. It is a reusable ferrule. It needs a frequent retightening. Limit temperature 400°C

Vespel

The composition of the Vespel ferrule is 100% polyimide. It is mechanically robust. It can be removed and reused several times. It is an ideal material for glass and metal columns. It needs a frequent retightening. Limit temperature 350°C.

Teflon

These ferrules have been manufactured with 100% Teflon. It is totally inert and very soft. It is used for glass columns. Limit temperature 250°C.

Tk New Teide™ Ferrules for Gas Chromatography

Graphite Ferrules (100%)



Features:

- Ideal to work with FID and NPD interface applications
- General use to work with capillary columns
- It is the best material to work at high temperatures

Advantages:

- They seal perfectly in fused silica and glass columns
- They resist highest temperature, 450°C
- Very easy to remove

Limitations:

- They are easily deformed and can only be reused if they are not tighten in excess
- Not recommended to work with GC/MS detectors

Graphite ferrules, (short ferrules) for Agilent 4890, 5890, 6890 except for GC/MS



Cat.No	Description	For Capillary Column	Pk
TR-T031001 teide	1/16" to 0.4 mm	0.18 mm I.D.	10
TR-T031000 teide	1/16" to 0.5 mm	0.25-0.32 mm I.D.	10
TR-T031010 teide	1/16" to 0.8 mm	0.53 mm I.D.	10
TR-T031012 teide	1/16" to 1.0 mm	0.53-0.65 mm I.D.	10
TR-T031014 teide	1/16" to 1/16"	1/16" O.D.	10

Graphite standard ferrules



Cat.No	Description	For Capillary Column	Pk
TR-T031020 teide	1/16" to 0.4 mm	0.25 mm I.D.	10
TR-T031030 teide	1/16" to 0.5 mm	0.32 mm I.D.	10
TR-T031040 teide	1/16" to 0.8 mm	0.53 mm I.D.	10
TR-T031042 teide	1/16" to 1.0 mm	0.65 mm I.D.	10

Graphite standard ferrules (two holes)

Cat.No	Description	For Capillary Column	Pk
TR-T031100 teide	1/16" 2 holes, 0.4/0.4	0.25 mm I.D.	10
TR-T031102 teide	1/16" 2 holes, 0.5/0.5	0.32 mm I.D.	10

Graphite reducing ferrules



Cat.No	Description	For Capillary Column	Pk
TR-T031104 teide	1/8" to 0.4 mm	0.25 mm I.D.	10
TR-T031106 teide	1/8" to 0.5 mm	0.32 mm I.D.	10
TR-T031108 teide	1/8" to 0.8 mm	0.53 mm I.D.	10
TR-T031110 teide	1/8" to 1/16"	1/16" O.D.	10

TR-T031112 teide	1/4" to 0.5 mm	0.32 mm I.D.	10
TR-T031116 teide	1/4" to 0.8 mm	0.53 mm I.D.	10
TR-T031118 teide	1/4" to 4 mm	4 mm O.D.	10
TR-T031120 teide	1/4" to 6 mm	6 mm O.D.	10
TR-T031122 teide	1/4" to 1/16"	1/16" O.D.	10
TR-T031124 teide	1/4" to 1/8"	1/8" O.D.	10

TR-T031126 teide	1/8" two holes 0.5/0.5 mm	0.32 mm I.D.	10
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Special graphite ferrules for Shimadzu



Cat.No	Description	For Capillary Column	Pk
TR-T031128 teide	5 mm for Shimadzu	5 mm O.D.	10

Special graphite ferrules for ThermoFinnigan M4 Nut and M8 Nut



M4 Nut



M8 Nut

Cat.No	Description	For Capillary Column	Pk
TR-T031130 teide	0.5 mm ID (M8 nut) for ThermoFinnigan (CE)		10
TR-T031132 teide	0.8 mm ID (M8 nut) for ThermoFinnigan (CE)		10

TR-T031134 teide	Cup Ferrule for Thermo 0.25 mm I.D. (M4 nut)	10
TR-T031136 teide	Cup Ferrule for Thermo 0.35 mm I.D. (M4 nut)	10
TR-T031138 teide	Cup Ferrule for Thermo 0.45 mm I.D. (M4 nut)	10
TR-T031140 teide	Cup Ferrule for Thermo 0.80 mm I.D. (M4 nut)	10

Liner Seals for ThermoFinnigan Trace



8 mm graphite linear seal for ThermoFinnigan Trace **TR-T032050**

Cat.No	Description	For Capillary Column	Pk
TR-T032050 teide	Graphite Liner Seal 8mm for ThermoFi., Trace GC 1		

Liner Seals for Agilent



O-Ring **TR-T032056**

Cat.No	Description	For Capillary Column	Pk
TR-T032052 teide	Graphite Liner Seal 6.35 mm ID for Agilent		10
TR-T032054 teide	Graphite Liner Seal 6.52 mm ID for Agilent		10
TR-T032056 teide	O-Ring made of Viton for Agilent		12

New Teide™ Ferrules for Gas Chromatography Tk

Vespel/Graphite Ferrules

Features:

- Ferrules recommended for GC/MS detectors
- More appropriate ferrules for general use in capillary columns
- Perfect seal

Advantages:

- Mechanically robust and long life time ferrules
- Reusable ferrules

Limitations:

- Must be retightened
- Temperature limit 400°C

Vespel/Graphite ferrules, (short ferrules)
for Agilent 4890, 5890, 6890



Cat.No	Description	For Capillary Column	Pk
TR-T031060	teide 1/16" to 0.3 mm	0.10 mm I.D.	10
TR-T031070	teide 1/16" to 0.4 mm	0.25 mm I.D.	10
TR-T031080	teide 1/16" to 0.5 mm	0.32 mm I.D.	10
TR-T031090	teide 1/16" to 0.8 mm	0.53 mm I.D.	10

Vespel/Graphite
standard ferrules



Cat.No	Description	For Capillary Column	Pk
TR-T032000	teide 1/16" to 0.4 mm	0.25 mm I.D.	10
TR-T032010	teide 1/16" to 0.5 mm	0.32 mm I.D.	10
TR-T032020	teide 1/16" to 0.8 mm	0.53 mm I.D.	10
TR-T032022	teide 1/16" to 1.0 mm	0.65 mm I.D.	10

Vespel/Graphite standard ferrules (two holes)

Cat.No	Description	For Capillary Column	Pk
TR-T031150	teide 1/16" 2 holes, 0.4/0.4	0.25 mm I.D.	10
TR-T031152	teide 1/16" 2 holes, 0.5/0.5	0.32 mm I.D.	10

Vespel/Graphite reducing ferrules



Cat.No	Description	For Capillary Column	Pk
TR-T031160	teide 1/8" to 0.4 mm	0.25 mm I.D.	10
TR-T031162	teide 1/8" to 0.5 mm	0.32 mm I.D.	10
TR-T031164	teide 1/8" to 0.8 mm	0.53 mm I.D.	10
TR-T031170	teide 1/8" to 1/16"	1/16" O.D.	10
TR-T031172	teide 1/4" to 0.4 mm	0.25 mm I.D.	10
TR-T031174	teide 1/4" to 0.5 mm	0.32 mm I.D.	10
TR-T031176	teide 1/4" to 0.8 mm	0.53 mm I.D.	10
TR-T031178	teide 1/4" to 1/16"	1/16" O.D.	10
TR-T031180	teide 1/4" to 6 mm	6 mm O.D.	10
TR-T031182	teide 1/4" to 1/8"	1/8" O.D.	10

Teide™ Vespel/Graphite
reducing ferrules Two Holes

Cat.No	Description	For Capillary Column	Pk
TR-T031166	teide 1/8", two holes 0.5/0.5 mm	0.32 mm I.D.	10
TR-T031168	teide 1/8", two holes 0.8/0.8 mm	0.53 mm I.D.	10

Vespel Ferrules

Features:

- The composition is 100% polyamide
- Ideal for applications with isotherm temperature
- They can be reused several times
- Upper temperature limit 350°C

Advantages:

- Mechanically robust
- Reusable for several column changes

Limitations:

- Must be frequently retightened
- Do not resist high temperatures
- Leaks in case of temperature programming

Vespel ferrules, (short ferrules) for Agilent 4890, 5890, 6890

Cat.No	Description	For Capillary Column	Pk
TR-T031210	teide short 1/16" to 0.4 mm	0.25 mm I.D.	10
TR-T031212	teide short 1/16" to 0.5 mm	0.32 mm I.D.	10
TR-T031214	teide short 1/16" to 0.8 mm	0.53 mm I.D.	10

Vespel standard ferrules

Cat.No	Description	For Capillary Column	Pk
TR-T031216	teide 1/16" to 0.3 mm	0.10-0.18 mm I.D.	10
TR-T031218	teide 1/16" to 0.4 mm	0.25 mm I.D.	10
TR-T031220	teide 1/16" to 0.5 mm	0.32 mm I.D.	10
TR-T031222	teide 1/16" to 0.8 mm	0.53 mm I.D.	10
TR-T031224	teide 1/16" to 1.0 mm	0.65 mm I.D.	10
TR-T031226	teide 1/16" 2- holes 0.4/0.4 mm	0.25 mm I.D.	10
TR-T031228	teide 1/16" 2- holes 0.5/0.5 mm	0.32 mm I.D.	10

Vespel reducing ferrules

Cat.No	Description	For Capillary Column	Pk
TR-T031232	teide 1/8" to 0.4 mm	0.25 mm I.D.	10
TR-T031234	teide 1/8" to 0.5 mm	0.32 mm I.D.	10
TR-T031236	teide 1/8" to 0.8 mm	0.53 mm I.D.	10
TR-T031238	teide 1/8" 2-hole 0.5/0.5 mm	0.32 mm I.D.	10
TR-T031239	teide 1/8" 2-hole 0.8/0.8 mm	0.53 mm I.D.	10
TR-T031242	teide 1/8" to 1/16"	1/16" O.D.	10
TR-T031244	teide 1/4" to 1/16"	1/16" O.D.	10
TR-T031246	teide 1/4" to 1/8"	1/8" O.D.	10

Tk New Teide™ Ferrules for Gas Chromatography

Straight Ferrules

Graphite Straight Ferrules



Cat.No	Description	Pk
TR-T031157	teide Straight ferrule for tube 1/16" O.D.	10
TR-T031158	teide Straight ferrule for tube 1/8" O.D.	10
TR-T031159	teide Straight ferrule for tube 1/4" O.D.	10

Vespal/Graphite Straight Ferrules



Cat.No	Description	Pk
TR-T031190	teide Straight ferrule for tube 1/16" O.D.	10
TR-T031192	teide Straight ferrule for tube 1/8" O.D.	10
TR-T031194	teide Straight ferrule for tube 1/4" O.D.	10

Vespal Straight Ferrules



Cat.No	Description	Pk
TR-T031280	teide Straight ferrule for tube 1/16" O.D.	10
TR-T031282	teide Straight ferrule for tube 1/8" O.D.	10
TR-T031284	teide Straight ferrule for tube 1/4" O.D.	10

PTFE Straight Ferrules



Cat.No	Description	Pk
TR-T031250	teide Straight ferrule for tube 1/16" O.D.	10
TR-T031260	teide Straight ferrule for tube 1/8" O.D.	10
TR-T031270	teide Straight ferrule for tube 1/4" O.D.	10