

GRAPHITE . .

The Perfect " Universal " Ferrule Material !

& proven over 40 years ! > since we first introduced IT!

IF U Happen to FIND Anythig Better ! Tell Us !

We are Always Interested in NEW> ! > Innovative Ideas !

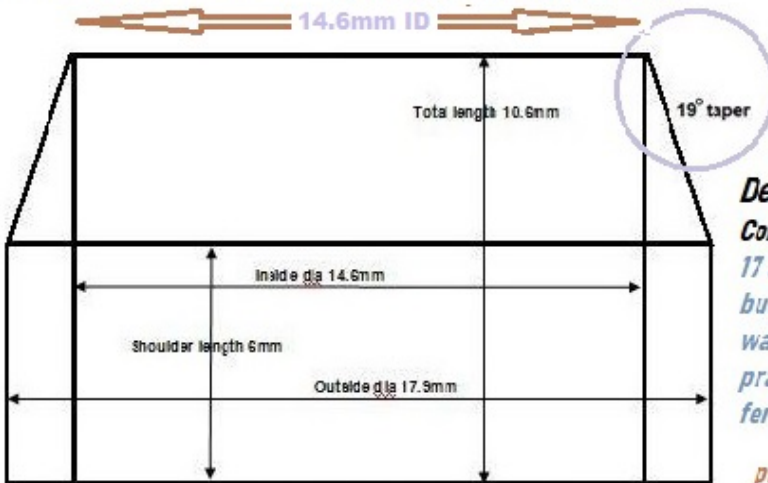


Custom Graphite Ferrules

this SIZE ?

an Example ONLY almost impractical > ASK!

ASK for QUOTE !
Specify ALL
Relevant DIMS
& Qty Req'd !



Default :
Cone Tip 0.1-0.3mm
17 deg cone taper
but depends on actual
wall thickness and
practicalities of the actual
ferrules "fragility"

pic > to scale (exact) !

SF17.9-14.6-10.5-6.0G {15,0.3}

real ! & more practical !

Our CODE #
all in mm

SFOD-ID-Length-ShoulderLength-G (ConeAngle,ConeThickness)

Large Graphite Ferrules

Standard

> **Swagelok SPECS re DIMS generally Imperial (100=1/16") & Metric (-M_ _)**

Customised

SFOD-ID-L-SL-G (" +detail ? ")

> -ConeAngle(17deg >Swagelok) ,-ConeTip Thickness (IF required !)
> All sizes are in mm (unless " Inch otherwise specified)



GFs Overview

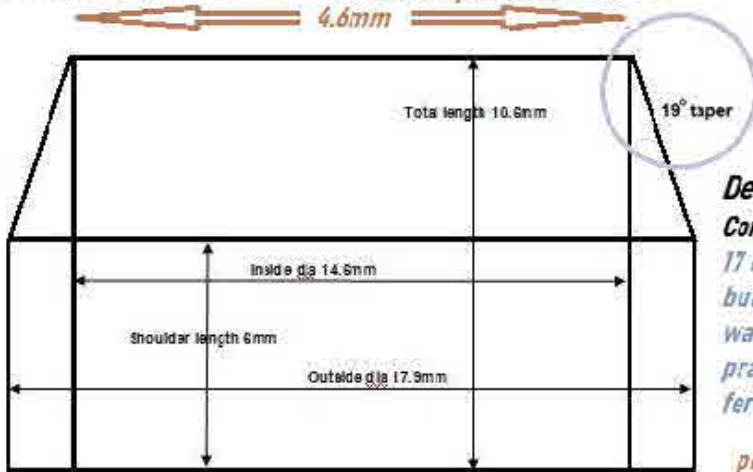
Current Prices 2022

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for OPTIMUM Performance > Use OUR recommended SPECS
> as many compromises are possible ELSE > a DISCLAIMER!
NOT ALL Your wishes are necessarily Practical! either!

Standard > Swagelok Fittings (typical DIMs)

> other OEM "copies" may NOT be identical re ALL ("exact") DIMs

Imperial (In)

Metric (mm)

where "100"	=1/16 "	Actual OD	/L	/SL		ActualOD	/L	/SL
SF400PI	1/4"ID	0.373	0.283	0.110				
SF400G		0.384	0.268	0.120				
SF600G	3/8" ID				SF400/M6G			
SF800G	1/2"				SFM8G			
SF1000G	5/16"				SFM10.6G	17.8		
SF1200G	3/4"				SFM12G			
SF1400G	7/8"	1.15	0.40 (11.27)	0.18	SFM14G			
SF1600G	1.0"	31.9mm 1.25"	10.8 0.39"	4.8mm 0.18"	SFM16G			
SF2000G	1-1/4"	1.475	0.55	0.26	SFM20G			
SF2400G	1-1/2"	1.87	0.79	0.40 (0.06")	SFM25G	30.0	10.2	4.9
SF2800G	1-3/4"				SFM28B			
SF3000G	1-7/8"				SFM32G	42.18 31.93	18.62	
SF3200G	2.0"	2.56	1.05	0.30(0.07)				



see pic > more details



to be confirmed

SF2.56/2.00/1.05/0.30/(0.07)-G

+/- Tolerance +0.002" -0.002" 0.005" 0.005"

NO Tooling Costs Apply for "Standard" Ferrules . . . > OR NON-Standard "negotiable"
> with YOUR Fitting sample & DIMS provided > but depending on difficulty!

- Graphite Ferrules are UNIQUE
- Soft > Malleable squash into Shape > in-situ!

- **DISCLAIMER > over-ride**
Thread & Inner profile of NUT invariably results in extrusion of the Graphite into the threads etc > some applications the ferrules may be marginally COMPROMISED re compression Density !
- ASK > for recommendations in these "extreme" situations !
- NOT ALL DIMS are in fact feasible
- Custom Tooling : Small <1/2"ID \$100; Large >1/2" - 2"ID \$150 - IF required ? > ASK !
- Limitations > Size vs Wall thickness vs Length
- Graphite Ferrules are NOT machine as such \
- > Soft / Malleable & CAN be squashed in-situ into shape (but marginally ? > by a few "thous" w/o losing integrity)
- BUT High Compression Moulding in a Tooling "Die Ste"
- Extreme Pressures used (but Graphite is "elastic") and the laminated format whilst a good compromise can still result in infusion leaks under high vacuum minimised by high torque tightening in a "truly captured" fitting format !
- **ALWAYS TRIAL TEST RE- SAFETY ! > & Can be highly APP DEPENDENT !**
re temperature and Pressure > Graphite has a LOW co-eff of friction !
RE Supporting extreme weights in a Vertical position > Tube may tend to "slide" > out !
> an EXTREME situation > TEST Safely . . . but

NOTE : CHROMTECH is the ONLY known OEM of these Large Graphite Ferrules !

AND the "prime" Inventor of GFs for Chromatography Use ! (from > '60s+)
& the source of Many OEM "copycats" since !

**some
APPS**

- General Purpose Ferrules -
- Replaceable (slides OFF!), (cost savings ! > eg for prototypes & reusable !)
- Reducing Ferrule Apps (compared to expensive metal fittings)
- Mainly Low(er) Pressure ! (<<1000psi depending on size ?)
- High Temperature APPS >1000C in inert atmosphere (furnace tubes)
- Gas Chromatography Columns, Inlet Liners
- Glass / Ceramic (Catalyst) Tubes > eg Gas Generators
- HighTemp Spectra Cells " Glass / Quartz { for eg IR, FTIR (higher VOCs >~C20))
- - where Size DIMs eg OD are far more critical to fit & seal !

The UNIVERSAL Ferrule for many APPS

SOFT & Malleable material NOT Amorphous !

where normal metal Ferrules are Useless
> & tend to break or distort glass, ceramic > metal tubing !

In Fact

whats-more ! with care the GFs can be reused !
> & simply slide-off the tube

> leave the GF inside the "nut" > they do NOT require any metal "backing" ferrule ! . . . except for 1.5, 1.75, 2.0"ID where backing ferrule is required (and uses less graphite to make !)

Small GFs : Ferrules in General

SHOP Cart Ferrules

MalsCart > some Ferrules
also this Site >

* <https://www.chromtech.net.au/chrom-ferrules-ct.htm>

Large GFs PDF

GF Spec Data Sheet PDF

PDF Ferrules List

FlipHTML5 Ferrules

* ALT SHOP GFs

Large GFs >10mm

* Custom Tooling Cost >
(<10mm ID) \$75)
10-25mm ID \$150
25--50mm \$195

"once-off" charge if the size NOT
already an in- stock item !

We will ask firm order(er)s to specify / verify the exact DIMs preferred and We THEN Supply OUR nearest "suitable" re OD /L /SL / ("Tip" strengthened re fragility ! where necessary !)
> else a Tooling Cost Applies
INSUFFICIENT Details THEN
> NO Order will be processed !

* YOUR Inaccuracies ? > NO Returns accepted !